SUMMARY

Introduction

Los Alamos National Laboratory (LANL) is one of several national laboratories that supports the U.S. Department of Energy's (DOE's) responsibilities for national security, energy resources, environmental quality, and science. LANL is located in north-central New Mexico, within Los Alamos County and Santa Fe County, about 60 miles (97 kilometers) north-northeast of Albuquerque and about 25 miles (40 kilometers) northwest of Santa Fe (see Figure S-1). The small communities of Los Alamos townsite, White Rock, Pajarito Acres, the Royal Crest Mobile Home Park, and San Ildefonso Pueblo are located in the immediate vicinity of LANL.

On November 26, 1997, Congress passed Public Law (PL) 105-119, the *Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act*, 1998 (Section 632, 42 United States Code [U.S.C.] §§2391; "the Act"), which directs the DOE to convey or transfer parcels of DOE land in the vicinity of LANL to the Incorporated County of Los Alamos, New Mexico, and the Secretary of the Interior, in trust for the Pueblo of San Ildefonso. Such parcels, or tracts, of land must not be required to meet the national security mission of the DOE and must also meet other criteria established by the Act.

Background

Before World War II, the general area of Los Alamos, New Mexico, consisted of small ranches and farms interspersed among vast forest and meadow areas. In the spring of 1943, nearly 49,337 acres (19,981 hectares) of land were acquired by the War Department from the U.S. Forest Service (USFS), the Bureau of Land Management (BLM), and the purchase or condemnation of privately held land to serve as the location of a secret research and development facility for the world's first nuclear weapon. This facility has had several names over the years, but the name LANL will be used throughout this summary regardless of the time period being discussed. The DOE is the Federal agency with current administrative responsibility for LANL.

After World War II ended, an additional 19,725 acres (7,988.6 hectares) of land were acquired from the administrative control of other Federal agencies during the late 1940s and added to the LANL reservation. Another 3,925 acres (1,590 hectares) were acquired from the administrative control of the National Park Service (NPS) in the early 1960s (Presidential Proclamation No. 3539).

In 1949, the New Mexico Legislature created the County of Los Alamos (the County) from portions of Santa Fe and Sandoval Counties. However, most of the County remained under the control of the Federal Government until the 1950s. Under the *Atomic Energy Community Act* (AECA) of 1955 (42 U.S.C. §§2301-2394), the Federal Government recognized its responsibility to provide support for a specified period to agencies or municipalities that were strongly affected by their proximity to facilities that are part of the nation's nuclear weapons complex while these communities achieved self-sufficiency. The towns of Oak Ridge, Tennessee; Richland, Washington; and Los Alamos, New Mexico were established as wholly government-owned communities in which the Federal Government provided all municipal, educational, medical, housing, and recreational facilities. The AECA set forth the policies and obligations of the Federal Government to these communities. These policies were directed at terminating Federal Government ownership and management of the communities by facilitating the establishment of local self-government,

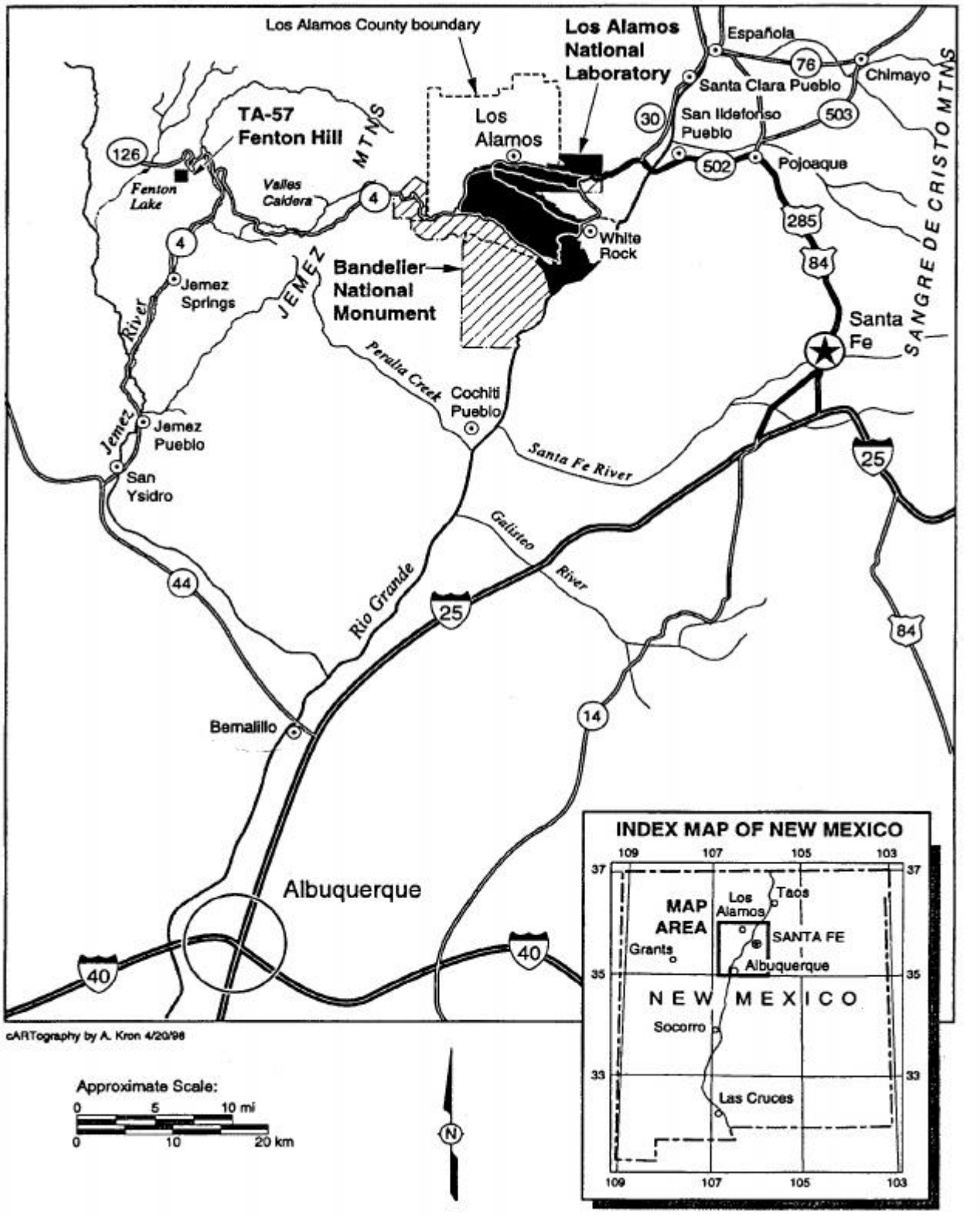

Figure S-1. Location of the Los Alamos National Laboratory.

providing for the orderly transfer to local entities of municipal functions, and providing for the orderly sale to private purchasers of property within these communities. The establishment of self-government and transfer of infrastructure and land were intended for the purpose of encouraging self-sufficiency of the communities through the establishment of a broad base for economic development. The DOE's predecessor agency leased and disposed of some of the Federal lands under its management to the County, other government agencies, and to private parties in the late 1950s and early 1960s. In 1967, the DOE's predecessor agencies began to transfer ownership of land tracts, roads, buildings, and some of the utility systems managed for the DOE to the County to be made available for public use. The land released at that time was primarily located within the Los Alamos townsite and had been used for civilian housing and community support functions. A relatively small amount of land was auctioned to individuals and private developers to establish the Royal Crest Mobile Home Park, the White Rock and Pajarito Acres communities, and to develop areas in and around the Los Alamos townsite. Additionally, a number of various leases for small tracts of land within the County were entered into during this period. The release of these lands from Federal Government use in the late 1960s enabled them to be developed for a variety of uses, ranging from preservation to urban development.

Over the years, the LANL boundaries have changed and have been reduced extensively as a result of several land transfer efforts. Today, only about 38 percent of the total land that historically comprised the LANL reserve remains under the DOE's administrative control. The bulk of this remaining land is occupied by LANL, with the University of California as the DOE's current Management and Operating contractor conducting day-to-day operation of the site. Currently, LANL is bordered by the lands of several landowners and stewards with a variety of land uses.

Public Law 105-119

On November 26, 1997, Congress passed PL 105-119. Section 632 of the Act directs the Secretary of Energy (the Secretary) to convey to the Incorporated County of Los Alamos, New Mexico, or to the designee of the County, and transfer to the Secretary of the Interior, in trust for the Pueblo of San Ildefonso, parcels of land under the jurisdictional administrative control of the Secretary at or in the vicinity of LANL. Such parcels, or tracts, of land must meet suitability criteria established by the Act.

The Act sets forth the criteria, processes, and dates by which the tracts will be selected, titles to the tracts reviewed, environmental issues evaluated, and decisions made as to the allocation of the tracts between the two recipients. The DOE's responsibilities under the Act include identifying potentially suitable tracts of land according to criteria set forth in the law (see Appendix A); conducting a title search on each tract of land (Title Report [DOE 1999a]); identifying any environmental restoration and remediation that would be needed for each tract of land (Environmental Restoration Report [DOE 1999b]); and conducting *National Environmental Policy Act* (NEPA) of 1969 review of the proposed conveyance or transfer of the land tracts (*Environmental Impact Statement* [CT EIS] *for the Conveyance and Transfer of Certain Land Tracts Administered by the U.S. Department of Energy and Located at Los Alamos and Santa Fe Counties, New Mexico*). The Act further states that the Secretary must, to the maximum extent practicable, conduct any needed environmental restoration or remediation activities within 10 years of enactment (by November 26, 2007). Under the Act, the DOE

has no role in the designation of recipients nor how the parcels of land will be allocated between the recipients. The required actions are summarized in Table S-1.

Table S-1. PL 105-119 Conveyance and Transfer Process Steps

PROCESS STEPS	DATE DUE	RESPONSIBLE PARTY(S)	COMPLETED
Passage of PL 105-119 (Congress decides the DOE must transfer and convey suitable land)	November 26, 1997	U.S. Congress	Yes
Preliminary identification of parcels (report to Congress on land identified as suitable for conveyance or transfer by virtue of meeting PL 105-119 criteria) (Land Transfer Report)	February 24, 1998	DOE	Yes
Title review (report to Congress setting forth the results of a title search on each parcel of land identified as suitable) (Title Report)	November 26, 1998	DOE	Yes
Environmental restoration (identify the environmental restoration or remediation action, if any, that is required with respect to each parcel of land identified) (Environmental Restoration Report)	August 26, 1999	DOE	Final
Review of environmental impacts of the conveyance or transfer of each parcel as required under the provisions of NEPA (42 U.S.C. 4321 *et seq.*) (Final CT EIS)	August 26, 1999	DOE	Final
Report to Congress on results of Environmental Restoration Report review and Final CT EIS (combined data report to Congress) (Combined Data Report)	August 26, 1999	DOE	No
Agreement on allocation of parcels between Los Alamos County and San Ildefonso Pueblo (Agreement submitted to the Secretary)	November 24, 1999	Los Alamos County and San Ildefonso Pueblo	No
Conveyance and Transfer Plan to Congress (plan for conveying or transferring land according to Agreement on allocation of parcels) (Conveyance and Transfer Plan)	February 22, 2000	DOE	No
Conveyance and transfer of land (action to convey or transfer tracts meeting suitability criteria must be undertaken by the Secretary)	November 25, 2000	DOE	No
Environmental restoration and remediation completed on the lands to be conveyed or transferred	November 26, 2007	DOE	No

Process Steps Associated with Public Law 105-119

Land Transfer Report

As required by the Act, the DOE has identified 10 tracts of land as being potentially suitable for conveyance and transfer (see Figure S-2). These 10 tracts of land are as follows:

- **The Rendija Canyon Tract** consists of about 910 acres (369 hectares).[1] The canyon is undeveloped except for the shooting range (the Los Alamos Sportsman's Club) that serves the local community; portions of this tract are currently under lease from the DOE to the community.
- **The DOE Los Alamos Area Office (LAAO) Tract** consists of about 15 acres (6 hectares). It is also within the Los Alamos townsite and is readily usable. DOE employees occupy offices at the site.
- **The Miscellaneous Site 22 Tract** is a small, Los Alamos townsite parcel located on the edge of the mesa overlooking Los Alamos Canyon. It consists of less than 0.5 acre (0.2 hectare) of disturbed land that is undeveloped and currently is used as an unsanctioned vehicle parking area.
- **The Miscellaneous Manhattan Monument Tract** consists of less than 0.5 acre (0.2 hectare). The Manhattan Monument is a small, rectangular site located within Los Alamos County land and adjacent to Ashley Pond, where most of the first Los Alamos laboratory work was conducted. A small log structure occupies the site.
- **The DP Road Tract** (North, South and West) consists of about 50 acres (20 hectares). It is generally undeveloped except for the West section where the LANL archives are currently located in one of two buildings.
- **The Technical Area (TA) 21 Tract** consists of about 260 acres (105 hectares) and is located east of the Los Alamos townsite. This occupied site is remote from the main LANL area; University of California workers occupy offices at the site, and LANL operations are conducted at facilities there.
- **The Airport Tract** consists of about 205 acres (83 hectares). Located east of the Los Alamos townsite, it is close to the Small Business Center Annex (on East Gate Drive). The Los Alamos Airport is located on part of the tract, while other portions of the tract are undeveloped.
- **The White Rock Y Tract** consists of about 540 acres (219 hectares). It is undeveloped and is associated with the major transportation routes connecting Los Alamos with northern New Mexico.
- **The TA 74 Tract** consists of about 2,715 acres (1,100 hectares). It is a large, remote site located east of the Los Alamos townsite and is largely undeveloped. This parcel was restored to the public domain by Presidential Proclamation 3539 on May 27, 1963; PL 105-119 provides the necessary legislation required for the tract to be disposed of by the DOE at this time.

[1] All acreages given are approximate. Actual acreage would be determined with ground surveys if conveyed or transferred. Acreages provided by the Land Transfer Report (DOE 1998b) have been adjusted herein to include some rights-of-way that were inadvertently excluded from that report.

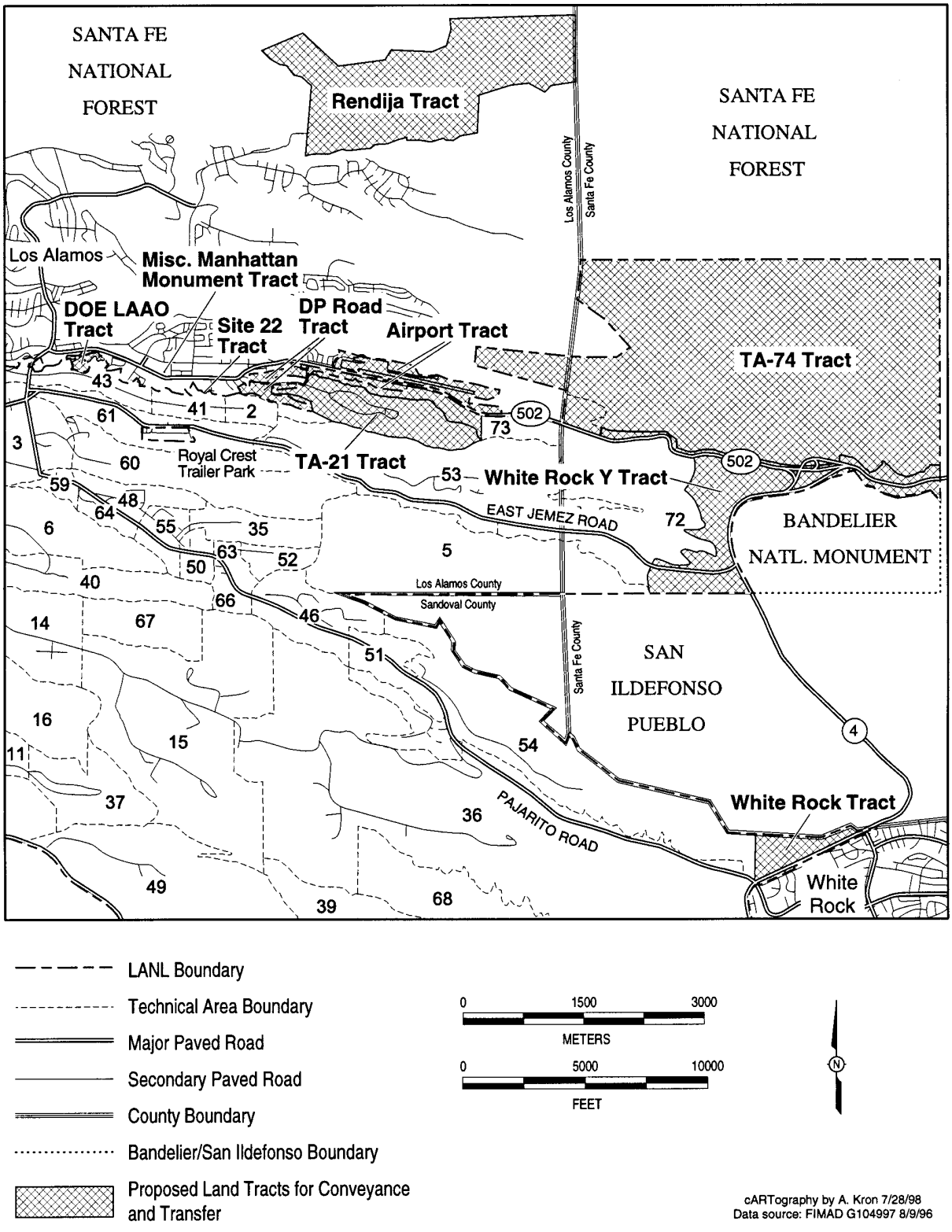

Figure S-2. Communities and Technical Areas of Los Alamos National Laboratory and Subject Tracts.

- **The White Rock Tract** consists of about 100 acres (40 hectares). It is undeveloped except for utility lines, a water pump station, and a small building in use by the County.

The 10 tracts are the subject of the DOE's Land Transfer Report (DOE 1998b), which was submitted to Congress in early 1998.

Title Report

As required by the Act, the DOE has conducted a review of its ownership for each of the 10 tracts of land identified as being potentially suitable for conveyance and transfer. The results of this search (in the form of formal Title Reports) for any claims, liens, or similar instruments affecting DOE's title to its interests in the real property for each of the 10 subject tracts were submitted to Congress (DOE 1999a). No "clouds on the titles" were discovered during the search.

The Environmental Restoration Report

As required by the Act, along with this CT EIS, the DOE is in the parallel process of identifying any environmental restoration and remediation necessary before it can dispose of the subject tracts. The Environmental Restoration Report[2] (DOE 1999b) presents estimates based on existing information about types and locations of contaminants; no effort has been made to generate new data on the subject tracts. Descriptions of the type and extent of known tract contamination, the regulatory status of the site contamination, potential waste generation associated with environmental restoration activities, the estimated costs and durations for cleanup, and other site concerns are included in the report; it also identifies areas where no site data are yet available. The Environmental Restoration Report differs from the EIS in several respects concerning the range of information provided. Some of the assumptions made in the report are more conservative in nature than the assumptions made in the CT EIS analysis.

The LANL Environmental Restoration (ER) Project has its own process of site investigation, data analysis, public and stakeholder involvement, and remediation that occurs under auspices of an administrative authority (either the New Mexico Environmental Department or the DOE). LANL is regulated under the *Resource Conservation and Recovery Act* (RCRA). The activities under the LANL Environmental Restoration Project are subject to DOE review for compliance with the NEPA at the time that proposals for actions become ripe for decision, which is typically after public input and administrative authority agreement to pursual of specific types of cleanup activities. To the extent that this information is known or that reasonably bounding data have been developed, the information is presented and used in the CT EIS analysis. Additional DOE NEPA review will be necessary for the majority of the activities yet to be undertaken at most of the subject tracts.

CT EIS

The review of environmental impacts of the conveyance or transfer of each parcel, as required by the Act, is the subject of this CT EIS. The NEPA compliance process, the general document scope, the purpose and need for DOE action, the decisions to be supported by the impact analysis, a description of the alternatives analyzed, and a brief discussion and comparison of the impacts likely to occur if either alternative were implemented are discussed later.

[2] A separate, detailed Environmental Restoration Project plan has been prepared for the TA 21 Tract, in addition to the report required by PL 105-119. Congress requested this plan in the conference report of the House and Senate Committees on Appropriations which accompanied the *Energy and Water Development Appropriation Act for Fiscal Year 1999* (PL 105-245). This plan describes environmental restoration activities and costs for approximately the next 8 years.

Combined Data Report

As required by the Act, a report presenting information regarding the environmental restoration or remediation required for the subject tracts (including estimated costs and cleanup durations), and the potential environmental impacts associated directly, indirectly, and cumulatively with conveyance and transfer of the subject tracts will be submitted to Congress. This report may make recommendations for the conveyance or transfer of each of the subject tracts, either in whole or in part, with regard to the likelihood of the DOE being able to meet the suitability criteria established in the Act.

Agreement on Allocation of Parcels

As required by the Act, the Incorporated County of Los Alamos and San Ildefonso Pueblo must reach an agreement on the allocation of parcels between them and submit documentation of this agreement to Congress. This is an action to be undertaken by the County and San Ildefonso Pueblo.

Conveyance and Transfer Plan

As required by the Act, the DOE must submit a plan outlining how it will proceed with conducting the actual conveyance or transfer of each of the subject tracts, in whole or in part, to the two recipients per their agreement of allocation. This plan will likely be associated with a Record of Decision (ROD) for the CT EIS (or may be contained within the ROD). Additional RODs may be issued later within the 10-year timeframe specified under the Act. The Conveyance and Transfer Plan will implement decisions made in the ROD(s), which will take into consideration the estimated costs and cleanup durations and the technical feasibility of achieving restoration and remediation to the maximum extent practical, as required under the Act, for one of the three uses established by PL 105-119; it also will consider the reasonably foreseeable environmental impacts potentially associated with the subject tracts as a result of conveyance and transfer.

Conveyance or Transfer of Land

The DOE shall convey or transfer parcels in accordance with the allocation agreement between the two recipients, subject to the requirements of the Act for retention of lands needed for the DOE to meet its national security mission and/or the requirements for environmental restoration or remediation (providing this requirement is met within the 10-year period beginning on the date of enactment of the Act).

Environmental Compliance Actions Required Prior to Conveyance or Transfer

Discussion of the environmental compliance actions required for the DOE to convey or transfer real property is provided in the *Crosscut Guidance on Environmental Requirements for DOE Real Property Transfers* (DOE 1997c). Several of these compliance actions are additional to those required by either the Act or NEPA: completion of an Environmental Baseline Survey Report, completion of consultation requirements under the *Endangered Species Act* and the *National Historic Preservation Act*, completion of consultation regarding traditional cultural properties, and completion of compliance action requirements for 10 Code of Federal Regulations (CFR) 1022, DOE Compliance with Floodplain/Wetlands Environmental Review Requirements. Actions to meet the procedural requirements of DOE (General Provisions) 10 CFR 1022 have been undertaken by the DOE both concurrently with and as part of the CT EIS process. Specifically, as provided for by 10 CFR 1022, a Floodplain and Wetland Assessment was prepared and incorporated into the Draft CT EIS (see Appendix D); a separate Notice of Floodplain and Wetlands Involvement was published in the *Federal*

Register (FR) (see copy of this notice in Appendix C), and a Statement of Findings is included in the Final CT EIS. No comments were received from members of the public regarding the Notice of Floodplain and Wetlands Involvement.

NEPA Process

In accordance with NEPA, the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), the DOE NEPA Implementing Procedures (10 CFR 1021), and DOE's NEPA orders and guidelines, the DOE determined that an EIS should be prepared to assess the potential environmental impacts of conveying and transferring certain land tracts at LANL located within the Incorporated County of Los Alamos and Santa Fe County.

On May 6, 1998, the DOE published in the FR a Notice of Intent (NOI) to prepare an EIS (63 FR 25022). The public scoping period began with the publication of this NOI and ended June 30, 1998. In the NOI, the public was invited to provide comments on the scope of issues to be assessed in the EIS. Public scoping meetings were held in three locations: Los Alamos, New Mexico (May 19, 1998); Santa Fe, New Mexico (May 20, 1998); and Española, New Mexico (May 21, 1998). Comments were accepted verbally, electronically, by phone, and in writing.

The issues identified by the public and the potential impacts to human health and the environment that could result from the proposed conveyance and transfer of land at Los Alamos were analyzed. The Draft CT EIS was prepared to present the results of these analyses and discuss the associated issues. The public was invited to review the Draft CT EIS and provide comment. These comments were taken into consideration and appropriate changes were made to the Final CT EIS.

The actual decision will be documented in a ROD(s) to be issued no sooner than 30 days after the publication of the Notice of Availability for the Final CT EIS in the *Federal Register*.

Role of Cooperating Agencies

Various LANL area government agencies potentially affected by the actions have participated in the CT EIS preparation process as Cooperating Agencies. They have contributed information needed for analysis of the cumulative impacts that could result from the DOE decision to convey or transfer all or part of the subject tracts. These agencies are as follows:

Incorporated County of Los Alamos

San Ildefonso Pueblo

U.S. Department of the Interior

- NPS, Bandelier National Monument (BNM)
- BLM, Taos Office
- Bureau of Indian Affairs

U.S. Department of Agriculture

- USFS, Santa Fe National Forest, Española District

General Scope of the CT EIS

Results of Scoping

NEPA (40 CFR 1501.7) requires Federal agencies to invite the participation of affected Federal, State, and local agencies; any affected Indian tribe; the proponent of the action; and other interested parties to comment on the scope and significant issues to be analyzed in the CT EIS.

The DOE received approximately 110 comments from 31 commentors on the scope of the CT EIS via public comment forms, letters, electronic mail, and public meetings. These comments were used to shape the Draft

CT EIS analysis and were incorporated as appropriate and to the extent practicable within the Draft CT EIS analysis.

- **Cultural Resources.** Surveys of cultural resources and archaeological sites should be conducted and any change in the protection of cultural resources due to disposition of the tracts should be analyzed.
- **Natural Resources, Wildlife, and Threatened and Endangered Species.** Increased development, traffic, recreation, and other activities and the impacts to the natural and wildlife resources, including sensitive habitat loss or degradation should be analyzed.
- **Cumulative Impacts.** The analysis of cumulative impacts should include transfer and development of all 10 parcels as a whole, not just on a tract-by-tract basis.
- **Environmental Justice.** Environmental justice issues should be addressed in the CT EIS.
- **Historic Trails, Recreation, and Public Access to National Forest Lands.** The impacts from the proposed transfer and development of the 10 tracts on the recreation, easements, and rights-of-way should be addressed.
- **Fire Hazard.** The impacts of development on the potential for catastrophic fires and the plans for fire management should be addressed.
- **Cooperating Agency Status.** The County of Los Alamos requested to be designated by the DOE as a Cooperating Agency under NEPA and DOE regulations.
- **Environmental Restoration.** The relation of the capability to clean up a tract within 10 years, the cleanup levels, the associated costs, and the decision whether to transfer the tract should be clarified.
- **Alternatives.** The CT EIS should evaluate the transfer of tracts other that those identified in the report to Congress. Some of the land identified for transfer should be removed from the transfer process.
- **Restrictions or Easements.** The potential for placing restrictions on the use of the land or specifying the type of use for the land should be examined.
- **Future Uses.** The future uses should include consideration of recreational uses, aesthetic uses, and uses by natural resources, such as wildlife. The religious and cultural significance of these areas should be considered in evaluating the future uses of the land.
- **Partial Conveyance or Transfer.** The potential to transfer or convey portions of the identified tracts according to different schedules should be clarified.
- **Homesteader Issues.** The issue of claims by homesteaders and their descendants on LANL lands should be considered.
- **Environmental Monitoring.** The environmental monitoring of these areas is essential and should be coordinated with the Pueblo of San Ildefonso and other agencies to ensure the public of their safe use.
- **Water Rights and Utility Corridors.** Water use should be analyzed in the CT EIS, including contamination problems, low water supplies, and utility corridors for all potential developments.

Related NEPA Studies

In this CT EIS, the DOE examines the environmental consequences that could be

expected if each of the 10 identified land tracts, in whole or in part, were conveyed or transferred with subsequent development and use of the tracts for the purposes identified by the Act and as further contemplated by the recipients. However, other DOE NEPA reviews recently completed or currently being conducted could affect the analysis of the long-term result of the conveyance and transfer actions. These DOE NEPA documents' relationships to the CT EIS are discussed in the following paragraphs.

1999 Final LANL Site-Wide Environmental Impact Statement

The Draft LANL Site-Wide Environmental Impact Statement (the SWEIS) was issued in early May 1998 (DOE 1998a). The Final SWEIS was issued in early 1999, and a ROD was issued on September 13, 1999. Information contained in the SWEIS regarding environmental resources or existing conditions is used extensively in the CT EIS. Use of the Preferred Alternative from the SWEIS as the basis for the No Action Alternative in the CT EIS provides a reasonable upper "bounding analysis" of impacts regarding those resources of concern to the Conveyance and Transfer of Each Tract Alternative (the "Proposed Action Alternative") analysis. This approach assures that the CT EIS has not underestimated the potential impacts that may result from the conveyance and transfer of the subject tracts. In particular, the level of use of utilities (such as electricity and natural gas), waste management and disposal facilities, and groundwater resources are maximized in the SWEIS Preferred Alternative. As the four alternatives analyzed in the Final SWEIS relate to varying levels of operations at LANL's key facilities, the 10 subject tracts for the CT EIS are either excluded from the analysis in the Final SWEIS (as they do not form a part of the LANL site) or they remain unchanged in land use across the Final SWEIS alternatives.

DP Road Tract Environmental Assessment

In early 1997, the DOE completed an analysis of the conveyance and development of 28 acres (11 hectares) on the so-called "DP Road Tract" in the DP Road Tract Environmental Assessment (DOE 1997a). The analysis was presented in an Environmental Assessment (EA) that was issued together with a Finding of No Significant Impact (FONSI) on January 23, 1997. No conveyance of this tract has occurred. The land conveyance action that was the subject of the DP Road Tract EA has been included in the current Proposed Action Alternative analysis being covered by the CT EIS. The information provided by the DP Road Tract EA has been incorporated in this document as part of the Proposed Action Alternative. Decisions relevant to this tract will be made based upon the analysis contained in the CT EIS.

Research Park Environmental Assessment

The Research Park EA (DOE 1997b) provided the analysis of the lease of about 60 acres (24 hectares) within LANL's TA 3 and TA 62 to the Incorporated County of Los Alamos or their designee for the construction, occupation, and use as a research park. The Research Park EA analysis supported the issuance of a FONSI in October 1997. Cumulative effects of the development and operation of the Research Park are part of the No Action Alternative for the CT EIS.

Electric Power Systems Upgrade Project Environmental Assessment

The DOE is considering the installation of a third, 18-mile (29-kilometer) electric line into LANL for the purpose of enhancing the reliability of electric service delivery into the LANL and Los Alamos County area. An EA is being drafted to analyze the potential effects of installing and maintaining a 345-kilovolt line from the Norton Substation

across the Rio Grande that would then drop down to a 115-kilovolt carrying capacity into the west side of LANL. Electricity demand within the Los Alamos County area due to increases in population, commercial, and industrial activities as a result of the conveyance and transfer of the subject tracts is analyzed in this CT EIS, including the cumulative impacts of the conveyance and transfer action, along with other known future electric power demands. The Electric Power Systems Upgrade Project EA is proceeding independently of this CT EIS because the action is independently justified, does not prejudice the decision(s), and the action being analyzed would not affect the total amount of electric power being brought into the area power pool at this time. The issue of increased electric power supply is a regional concern in northern New Mexico, and it would be expected to have its own NEPA analysis when it becomes ripe for action analysis. The installation of a third line into the LANL and Los Alamos County area is part of the No Action Alternative for the CT EIS.

Strategic Computing Complex Environmental Assessment

The DOE is considering the construction and operation of a new computing facility (the Strategic Computing Complex [SCC]) at LANL's TA 3. Equipment at this facility would be capable of operating at a 50 trillion floating point operations per second (TeraOps) computing power level.

An EA was prepared that considered construction, occupancy, and operation of the two-story, 267,000-square-foot (24,800-square-meter) building. The building structure includes office areas and a large, 43,500-square-foot (4,040-square-meter) computing area filled with state-of-the-art computer equipment. The reuse of large volumes of water for cooling and its subsequent evaporation were the main environmental concerns analyzed, together with the electric power demand that such a facility would place on the existing LANL and County power pool. The EA and FONSI were issued on December 21, 1998 (DOE 1998e). The impacts of the construction and operation of the SCC are included in the No Action Alternative for this CT EIS.

Nonproliferation International Security Center Environmental Assessment

The DOE is considering the construction and operation of a new centralized facility for LANL nonproliferation and security activities within the TA 3 portion of LANL. An EA was prepared that considered the construction, occupancy, and operation of the four-story, plus basement, 163,000-square-foot (15,143-square-meter) Nonproliferation International Security Center (NISC) building. The building structure includes office areas and laboratory capacity for 465 people. A high-bay area would be located at the side of the building. The traffic and parking conditions were the main environmental concerns analyzed, together with waste generation from construction activities. The EA (DOE/EA 1247) and FONSI were issued on July 22, 1999. The impacts of the construction and operation of the NISC are included in the No Action Alternative for the CT EIS.

Purpose and Need for Agency Action

The DOE needs to act in order to meet the requirements of Section 632 of the Act (PL 105-119, 42 U.S.C. §§2391). The Act requires DOE to convey and transfer certain parcels, or tracts, of land identified by the DOE as being suitable for conveyance or transfer, as defined by the Act. In order to be suitable for conveyance or transfer under the Act, these tracts must not be necessary for the DOE national security mission-related use; must have undergone any necessary environmental restoration or remediation

activities within 10-years of enactment; and must be suitable to support future uses for historic, cultural, or environmental preservation purposes; economic diversification purposes; or community self-sufficiency purposes by the named recipients. The parcels that have been preliminarily identified as suitable for conveyance or transfer by the DOE are located at or near the LANL within both Los Alamos County and Santa Fe County. The recipients of the land tracts will be the Incorporated County of Los Alamos (the County) or its designee, and the Secretary of the Interior, in trust for the Pueblo of San Ildefonso.

DOE Decisions to be Supported by the CT EIS

Section 632 of the Act provides a narrow basis for the decisions to be made by the Secretary of Energy. Under the provisions of the Act, the DOE must make a decision regarding the conveyance or transfer of each of the 10 tracts of land under DOE's administrative control that have been preliminarily identified as potentially being suitable for that action.

If a particular tract of land currently meets the three criteria for suitability, the DOE may decide to convey or transfer the tract, in whole or in part, as soon as March 2000. The DOE may defer a decision on those tracts that do not meet the criteria (that is, the tracts are currently needed for mission support purposes or require environmental restoration or remediation), provided that the tract meets the criteria by the close of the specified 10-year period.

The DOE may redefine the boundaries of a tract from the way they were previously defined (under the Land Transfer Report to Congress [DOE 1998b]) in order to allow an early decision on those portions of a tract that meet the criteria and therefore, could be disposed of as soon as practical. The DOE then may defer a decision on the remaining portions of the tract that would continue under DOE's administrative control until such time as they met the criteria, provided that occurs within the 10-year limitation imposed by the Act.

One of the tracts proposed for disposal, the TA 21 Tract, currently is used to support national security mission-related operations involving radioactive material and fusion energy research. The DOE LAAO Tract currently is occupied by nearly 100 DOE employees and contractors responsible for oversight of LANL. The DP Road Tract includes two buildings; one of these currently houses the LANL archives. All three of these tracts were considered to be likely to become unnecessary for mission support use by the DOE for various reasons within the defined 10-year timeframe. Since the Land Transfer Report was furnished to Congress in early 1998, a portion of the TA 21 Tract has recently been identified as being required beyond the 10-year timeframe for mission support purposes.

Nine of the ten tracts contain potential or known contaminated sites or areas that may require some degree of environmental restoration or remediation in order to be suitable for the uses approved by the Act. The Miscellaneous Manhattan Monument Tract is the only property that is not known to have any associated contamination issues. Environmental remediation or restoration activities for some of these contaminated areas may be achievable by the DOE before the end of the 10-year period in a technically and fiscally responsible manner. However, some of the sites may be extremely difficult and expensive to remediate or restore, and the DOE ultimately may not pursue such action, thereby making a no action decision on these sites. It is expected that the DOE will issue one or more RODs supported by the Final CT EIS analysis over the 10-year period ending November 26, 2007, in accordance

with the Secretary's plan for conveyance and transfer of the parcels.

There are decisions related to these parcels that the DOE will not make based upon this CT EIS analysis. While the potential beneficial and adverse impacts from future contemplated land uses of the tracts must be understood by the DOE in reaching its decision(s) regarding the conveyance or transfer of each of the tracts, the DOE will not decide upon future land uses for the 10 tracts or be responsible for mitigations not within the scope of DOE's control.

The DOE will not decide on which tract will be received by either of the named recipients. Section 632 of the Act specifically states that this decision is to be made exclusively by the County of Los Alamos and San Ildefonso Pueblo. The information developed in the course of preparing this CT EIS and the parallel Environmental Restoration Report may factor into this decision, but only to the extent that the two parties choose to make use of it. Should the two recipients fail to reach an agreement regarding the disposition of a tract, the land will not be conveyed or transferred.

The DOE, through the LANL ER Project, is conducting a separate process for site cleanup. This process will involve the public and State and Federal regulatory agencies to determine the appropriate level of cleanup to be undertaken for the subject tracts, the technical manner in which it will be achieved, and the priority of the actions. This separate process will include DOE's NEPA review of the cleanup actions as they become ripe for decision.

The DOE is directed by the language of the Act to remediate or restore the environment to a level of residual contamination compatible with one of the three uses identified in the Act, to the maximum extent practicable. It may not be possible within the time allotted by the Act for the DOE to reasonably achieve a level of cleanup consistent with the actual recipient's specific intended use for an individual tract in a fiscally prudent manner. The use of the language "to the extent practicable" in the Act indicates that lawmakers were cognizant of the need for this effort to be conducted in a reasonable fashion within the financial bounds imposed by congressional funding and other available resources given the status of the individual sites requiring remediation or restoration. It may only be possible that the DOE will be able to meet a minimal level of cleanup compatible with one of the uses named in the Act within the time allotted by the Act. This could result in a greater level of residual contamination.

There are plans in development for cleaning up the subject tracts. Like other cleanup plans, these plans will be dynamic and subject to revision and change. This is especially true for plans dealing with buildings that are currently in service and contain asbestos or other hazardous materials requiring decontamination before demolition may be undertaken. Plans will be developed to address the cleanup of these buildings and floodplain areas that may receive contamination washed downstream from other areas. To the extent known or anticipated, information on environmental restoration and remediation impacts is included in this CT EIS.

Proposed Action and Alternatives

Two alternatives are analyzed in this CT EIS: (1) the No Action Alternative and (2) the Conveyance and Transfer of Each Tract Alternative (the Proposed Action Alternative). The No Action Alternative, while fully analyzed for the purpose of providing a baseline for comparison of impacts, would not meet the need for agency action. The Proposed Action Alternative has been identified as meeting DOE's purpose and need for action. Other alternatives were

considered but were dismissed from further detailed analysis as being unreasonable in the context of NEPA because they do not meet the purpose and need for agency action. These various possible alternatives are discussed in the following sections.

No Action Alternative

The No Action Alternative would be to not convey or transfer the subject tracts of land. Under this alternative, the DOE would continue its administrative control of each or all of the individual tracts tentatively identified as a candidate for conveyance and transfer, and conveyance or transfer actions for each or all of the tracts would not occur. The subject lands would continue to be used as they are currently. Individual tracts would continue to be used to either support LANL uses (as undeveloped programmatic activity buffer zones; historic, cultural, or environmental preservation areas; future growth areas; or in support of ongoing or similar mission support functions). The DOE would continue to lease properties to the County and others for continuance of their current public relations, recreational, and commercial purposes. Under this alternative, land might not be restored or remediated in the same manner or timeframe as under the Proposed Action Alternative. LANL ER Project activities would be conducted on the tracts as they become funded in accordance with either existing or similar plans. Neither the County nor San Ildefonso Pueblo would gain additional land for their use as a means to promote self-sufficiency or diversification of their income basis.

Proposed Action Alternative

Under the Proposed Action Alternative, each of the 10 tracts of land identified as potentially suitable in DOE's Land Transfer Report (DOE 1998b) would individually be either conveyed or transferred, in whole or in part, to either the County or the Secretary of the Interior, in trust for San Ildefonso Pueblo. DOE actions associated with the conveyance and transfer of these land tracts would involve certain "paper transactions," and some tenant relocation activities. DOE actions would result in direct impacts. Additionally, indirect impacts could result from the development and use of the tracts by the two recipient parties. The direct and indirect impacts are analyzed in this CT EIS, together with potential cumulative impacts from the actions of other local and regional past, present, and future reasonably anticipated actions.

The relocation of current tract tenants to other, as-yet-unidentified locations is included in the analysis of this alternative. Additional NEPA review will be required for those future actions when the proposals on specific actions become ripe for decision(s).

Environmental restoration or remediation of the subject tracts potentially identified for conveyance and transfer would be the responsibility of the DOE and are expected to be accomplished as currently considered by the DOE in its plan entitled *Accelerating Cleanup: Paths to Closure* (DOE 1998c) and similar plans. It is not anticipated that the cleanup efforts would differ much between the Proposed Action Alternative and the No Action Alternative, although there could be some areas of cleanup that may differ between the alternatives. Possible exceptions include the timing of some activities (cleanup of some tracts could be completed sooner under the Proposed Action Alternative than under the No Action Alternative); the decommissioning, decontamination, and demolition of buildings and structures currently in use; and some floodplain cleanup actions. As such, most of the environmental restoration or remediation actions are not unique to the Proposed Action Alternative.

In considering the full suite of potential impacts that could result from DOE's action in implementing the conveyance and transfer of these parcels, the DOE must consider the planned uses of the land and the ensuing

potential environmental impacts subsequent to the conveyance and transfer of administrative control or ownership. Both the County and San Ildefonso Pueblo have expressed interest in pursuing uses of the parcels for the purposes established by the Act in ways that are potentially different from the manner in which the DOE has used the land. Therefore, the CT EIS analysis focuses on subsequent indirect property development and use contemplated by the County and by San Ildefonso Pueblo (including their tenants or other third parties) that could only occur if the DOE decides to convey and transfer the subject land tracts.

The two potential recipients identified their respective contemplated land uses for the 10 tracts after disposition. These planned land uses were developed by both potential receiving parties in accordance with their own internal government policies and processes. These plans encompass a range of potential land uses. The impacts of each contemplated land use are evaluated in this CT EIS. The DOE believes that the contemplated land uses encompass a range of reasonable and likely land uses, given the individual tracts' location, physical attributes, and obvious development constraints. Before implementation of any future use of each tract, the sponsoring party would need to comply with all applicable local, State, and Federal laws and regulations. This may include the preparation of project-specific EISs, EAs, or the equivalent that may be required under State law.

The potential contemplated uses identified for each tract and considered in this CT EIS analysis are as follows:

- **The Rendija Canyon Tract:** cultural preservation or residential development and environmental preservation (natural areas)
- **The DOE LAAO Tract:** residential or commercial development
- **The Miscellaneous Site 22 Tract:** commercial development
- **The Miscellaneous Manhattan Monument Tract:** historic preservation
- **The DP Road Tract:** industrial and commercial development or commercial and residential development
- **The TA 21 Tract:** commercial and industrial development
- **The Airport Tract:** airport, commercial, and industrial development
- **The White Rock Y Tract:** environmental preservation or cultural preservation
- **The TA 74 Tract:** cultural preservation or environmental preservation
- **The White Rock Tract:** cultural preservation and commercial development or commercial and residential development

Preferred Alternative

The DOE has identified the following subset of the Proposed Action Alternative, by tract, as its Preferred Alternative. Tracts are listed below in an approximate order of potential timing of disposition; the actual order of tract disposition may be slightly different. Consistent with PL 105-119, the actual disposition of each tract, or portion of a tract, would be subject to the DOE's continuing or future need for an individual tract, or a portion of the tract, to meet a LANL national security mission support function. This need could result from either direct or indirect activity involvement. Additionally, the disposition of each tract, or portion of a tract, would be subject to the ability of the DOE to complete of any necessary environmental restoration or remediation.

The DOE has concluded that significant portions of two tracts (the TA 21 Tract and the Airport Tract) will not be available for conveyance or transfer within the 10-year period specified by PL 105-119. This is due to identified national security operational needs of two facilities within TA 21 and the need for surrounding areas to be retained as security, health, and safety buffer areas. The area of buffer retention is roughly equivalent to about a one-half mile radius from the facility sites and includes portions of the TA 21 Tract and the Airport Tract.

The DOE also recognizes with regard to six of the remaining tracts that meeting the conveyance and transfer criteria within the mandated 10-year timeframe may not be possible for all portions of these tracts. For example, the current national security mission support functions that are conducted on the DOE LAAO Tract and the DP Road Tract could possibly require portions of the tracts to be retained for use beyond the 10-year timeframe established by the Act, although this is considered to be unlikely. Similarly, there may be newly proposed activities at LANL facilities that could require the retention of portions of tracts for national security mission support reasons. One example of this is a proton radiography project that recently has been proposed for consideration through the DOE's fiscal year 2001 budget. The DOE will evaluate this project over the next several months to determine whether the project should proceed. The project evaluation will include a NEPA analysis that considers alternatives to the proposed actions, which will then be used to inform a project decision(s). Engaging in this proposed project could result in an expanded security, health, and safety buffer area(s) being required that may intrude upon one or more of the tracts under consideration for disposal. Because the White Rock Y Tract is the nearest subject tract to one of the alternative LANL locations that will likely be evaluated for the proton radiography project, the DOE ultimately could require that this tract be reduced to a partial tract status for disposition. In this case, only essential areas would be retained, and the remainder of the tract would likely be conveyed or transferred.

Further uncertainty regarding the DOE's ability to convey or transfer all of the tracts results because some portions of the six tracts have associated contamination issues. Those portions of the tracts may potentially require environmental restoration or remediation that could be technically difficult to achieve or that could require more than the 10-year period established under the Act for completion of these actions. The LANL ER Project process, which includes input from stakeholders and approval by the Administrative Authority(s), will proceed with the anticipation of completing the necessary environmental restoration and remediation actions by the end of the year 2007. However, the DOE recognizes that some tracts that have contamination issues are going to consume more time and resources and be more expensive to clean up because the cleanup technical strategy could change from those currently planned by the ER Project. For example, in the case of the TA 21 Tract, the regulatory authority(s) could require exhumation of material disposal sites on that tract, rather than the currently planned capping, long-term monitoring strategy, and possible exhumation strategy. Further, it is not certain that cleanup of all of this tract is technically feasible. Reaching agreement on the cleanup approach and conducting the necessary testing and remedial action could be a lengthy process. The extra funding required for such a change in the planned cleanup also may require the appropriation of additional funding from Congress. In other cases, some tracts may include portions of canyon floodplains, which could be difficult to remediate. Given such considerations, it may not be possible to complete all of the necessary remediation or restoration actions

to release all portions of the subject tracts within the allotted timeframe.

The DOE is confident that it can convey or transfer in whole two tracts in the near term; these two tracts are not currently used nor are they anticipated to be needed in the future for national security mission support needs. Although one of the tracts has a minor surface disposal site, it can easily be remediated within a short period of time. These two tracts are the Miscellaneous Manhattan Monument Tract and the Miscellaneous Site 22 Tract.

The Preferred Alternative for conveyance and transfer of the 10 land tracts identified as potentially suitable, per the criteria established in Public Law 105-119, is as follows (within each grouping no order of conveyance or transfer is intended):

Convey or Transfer Entire Tract in the Year 2000, or Soon Thereafter:

- Miscellaneous Manhattan Monument Tract
- Miscellaneous Site 22 Tract

Convey or Transfer Entire Tract or Partial Tract (Portions of Tract Without Potential Contamination Issues or Mission Support Concerns) in the Year 2000, or Soon Thereafter, But Before the End of the Year 2007:

- DOE LAAO Tract
- White Rock Tract
- Rendija Canyon Tract
- TA 74 Tract
- DP Road Tract
- White Rock Y Tract

Convey or Transfer Partial Tract (Portions of Tract Without Potential Contamination Issues or Mission Support Concerns) at a Later Time, But Before the End of the Year 2007:

- TA 21 Tract
- Airport Tract

For the tracts that are conveyed in part, the DOE would continue to resolve outstanding national security mission support issues and any contamination cleanup required on the remaining portions of the tracts so that conveyance or transfer of those portions could occur before the end of the 2007 deadline stated in the Act. These six tracts with possible partial tract conveyances or transfers are discussed individually in more detail in the following paragraphs.

The DOE LAAO Tract is partially occupied by the DOE Los Alamos Area Office Building and parking lot area that currently houses about 120 DOE staff and contractor staff personnel. The site also has three small potential release sites (PRSs) that have already been remediated, although the remediation has not yet received regulatory concurrence. There are two tract buildings that may require decontamination and decommissioning (D&D) as well. The duration of these efforts is estimated to involve up to about 18 months and cost from about $4,253,000 to about $9,680,000.

The White Rock Tract has no known PRSs within its boundaries that would require remediation or restoration. However, the tract is bisected by a floodplain area that has not yet been sampled for possible contaminants. Investigation of the floodplain must be conducted, and although it is not anticipated that levels of site contamination would warrant remediation, some remediation may nevertheless be required. The duration of these efforts is estimated to involve up to about 16 months and cost from about $954,000 to about $3,374,000.

The Rendija Canyon Tract has four PRSs within its boundaries; three of these sites have already been remediated and restored although the remediation has not yet received regulatory concurrence. The tract also is bisected by a floodplain area in which sampling efforts must be conducted, and some areas of site remediation may be warranted. The duration of remediation is estimated to involve up to about 30 months and cost from about $19,053,000 to about $20,462,000.

The TA 74 Tract has four PRSs within its boundaries; all four of these sites have already been remediated and restored although the remediation has not yet received regulatory concurrence. The tract also is bisected by floodplain areas in which sampling efforts must be completed, and site remediation may be warranted. The tract could continue to receive contamination from upstream areas, so additional offsite investigation and remediation also may be warranted. The duration of tract remediation is estimated to involve up to about 22 months and cost from about $3,683,000 to about $215,666,000.

The DP Road Tract is occupied by two large buildings: one that is used for the LANL archive storage and one that is used for a contractor support facility. Additionally, the tract has 10 PRSs within its boundaries and eight small structures. Two of the PRSs have already been remediated and restored, and the remediation has received regulatory concurrence; the others remain under investigation or have been remediated and are awaiting regulatory concurrence. The tract also shares a floodplain area with the Airport Tract along DP Canyon, where cleanup is warranted. The duration of remaining investigation and possible site remediation is estimated to involve up to about 84 months and cost from about $26,986,000 to about $29,070,000.

The White Rock Y Tract has no PRSs within its boundaries. However, the tract is bisected by a floodplain area in which sampling efforts must be conducted, and some areas of site remediation may be warranted. The tract could continue to receive contamination from upstream areas, so additional offsite investigation and remediation also may be warranted. The duration of remediation is estimated to involve up to about 24 months and cost from about $1,880,000 to about $10,424,000.

The environmental impacts of the Preferred Alternative, based on current information, would be expected to be between those presented for implementation of the Proposed Action and the No Action Alternatives for each tract. The impacts of these actions are discussed in following sections.

Alternatives Considered but Eliminated from Detailed Analysis

The DOE considered potential alternatives to the proposed action that were identified during the scoping process. All of these potential alternatives were examined for their ability to meet the need for agency action. If the identified alternative could not meet the need for agency action, the alternative was eliminated from detailed analysis. Alternative actions that were considered but not analyzed in detail include:

- Conveyance or transfer to parties other than those identified by the Act
- Conveyance or transfer of the 10 tracts to other Federal agencies, such as the NPS or the USFS
- Conveyance or transfer of tracts with the retention of those tracts or portions of tracts with identified sensitive resources (such as wetlands, cultural or historic resources, or threatened or endangered species)
- Conveyance or transfer of parcels with cultural and natural resources to other Federal agencies whose jurisdiction includes management of these

resources at a level consistent with or greater than is currently performed by the DOE

- Retention by the DOE of areas where the contemplated land use would be in conflict with surrounding land uses
- Conveyance or transfer of two parcels of land not included in the April 1998 Land Transfer Report (namely, the so-called University Site on State Road 4 and the Research Park Phase II site)
- Deletion of the 25-acre (10-hectare) "DP South" Tract from the DP Road Tract and the eastern three-fourths of the 260-acre (105-hectare) TA 21 Tract from the scope of the EIS
- Maintenance of assistance payments and not engaging in land conveyance or transfer

Changes Since the Issuance of the Draft CT EIS

Since the issuance of the *Draft Environmental Impact Statement for the Conveyance and Transfer of Certain Land Tracts Administered by the Department of Energy and Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico* in February, 1999, there have been some changes in information, plans, and related NEPA documents. In addition, commentors from agencies, organizations, and the general public requested elaboration of several issues. These changes, as well as editorial corrections, are reflected in this Final CT EIS.

The DOE identified the Preferred Alternative in the Draft CT EIS as a subset of the Proposed Action Alternative where the timing of the disposition of each tract would be subject to the LANL Environmental Restoration Project process and consideration of the use of some of tracts for mission support activities. The individual tracts were grouped according to when the DOE believed each tract or parts of each tract might be conveyed or transferred. Due to the identification of mission need for the TA 21 Tract and further analysis of the potential human health impacts associated with the TA 21 operations, portions of the Airport Tract may not be suitable for transfer as soon as presented in the Draft CT EIS. These portions of the Airport Tract may be needed as a buffer zone for TA 21 operations as long as those operations are active.

One change to the CT EIS involved the discussion of the Los Alamos Sportsman's Club activities and lease on the Rendija Canyon Tract. The text was amended to clarify that the Pueblo of San Ildefonso and the Incorporated County of Los Alamos have both agreed to honor the existing leases and the County would renegotiate the lease should the Rendija Canyon Tract be conveyed to the County.

The CT EIS text regarding cultural resources has been modified to include the general information provided by the legal counsel for San Ildefonso Pueblo regarding the presence of traditional cultural properties (TCPs) on four of the tracts. Text regarding cultural resources and environmental justice has been clarified to explicitly discuss the potential for disproportionately high and adverse effects to minority populations based on impacts to TCPs. Text also was added to explain the current level of information available to the DOE to address impacts to TCPs and any related environmental justice effects. The opinions of the legal counsel for San Ildefonso Pueblo that there are environmental justice impacts related to the conveyance and transfer process or to contemplated land uses on particular tracts have been added to the environmental justice sections.

Other changes included new information on core and buffer habitat areas for threatened

and endangered species on the tracts and new information on water resources.

All comments on environmental restoration received during the comment period were also forwarded to the Environmental Restoration Project group for consideration. These comments were incorporated into the Final Environmental Restoration Report, and letters were sent to the commentors.

The CT EIS also was updated to include information about the Findings of No Significant Impact and Records of Decision that have been issued since the publication of the Draft CT EIS.

Appendix D, Floodplains and Wetlands, of the CT EIS was changed to include a *Statement of Findings for the Conveyance and Transfer of Certain Tracts Administered by the Department of Energy and Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico,* prepared in accordance with the regulatory requirements of 10 CFR Part 1022. This Statement of Findings was added to the CT EIS in keeping with the regulatory provisions, which allow an agency to make use of the NEPA documents to facilitate public disclosure requirements.

Summary of Public Comments and DOE Responses

The full text of the comments and responses to individual comments is presented in Appendix H of the CT EIS.

Several topics raised by public comments on the Draft CT EIS were of broad interest or concern. These topics were categorized as general issues and represent broad concerns directly related to the environmental consequences associated with implementing the alternatives analyzed in the CT EIS. Many commentors also raised topics that are not pertinent to this environmental review; however, for clarification, the DOE addressed them to the extent practicable. General issues include the following topics:

General Issue 1: Purpose and Need

General Issue 2: Deed Restrictions

General Issue 3: Basis for DOE's Decisions

General Issue 4: Public Law Process and the CT EIS

General Issue 5: Environmental Restoration Process

General Issue 6: Environmental Justice

General Issue 7: Homesteaders Association Claims

General Issue 1: Purpose and Need

Issue:

Commentors questioned whether the proposed conveyance and transfer of the tracts identified in the CT EIS would fulfill the purpose of Public Law (PL) 105-119. Commentors noted that Los Alamos County has stated that the proposed conveyance of these lands would not provide the income necessary for the County to become self-sufficient. Commentors also noted that the real costs for the County to meet the self-sufficiency goal, such as addressing the water and electrical usage demand, make the proposed action untenable. Therefore, commentors opined that the proposed conveyance and transfer action would not satisfy the purpose of PL 105-119, specifically Los Alamos County self-sufficiency, and that the conveyance and transfer action evaluated in this CT EIS does not meet the "purpose and need for agency action" presented in this CT EIS. Commentors further stated that for this reason the conveyance and transfer action should not be selected by the decisionmakers. Commentors also noted that other alternatives, such as continuing assistance payments to the County, were rejected because they did not meet the need for agency action. Commentors believe that if

the DOE's proposed action does not meet the need for agency action, it too should be rejected just as other alternatives were rejected.

Response:

The DOE believes there may be confusion between the "purpose and need" for DOE action and the intended purpose of PL 105-119. The purpose and need for DOE action evaluated in this CT EIS is "to act in order to meet the requirements of Section 632" of PL 105-119. The DOE has evaluated the conveyance and transfer action and other suggested action alternatives in light of meeting its requirements under PL 105-119—that is, to convey and transfer certain parcels of land identified by the DOE as being suitable for conveyance or transfer, as defined by PL 105-119. To be conveyed or transferred (1) the parcels of land must have been determined to be unnecessary for support of the DOE's national security mission requirements before November 26, 2007[3]; (2) the DOE also must complete, to the maximum extent practicable, any necessary environmental remediation or restoration by that time; and (3) the parcels must be suitable for use by the receiving parties for historic, cultural, or environmental preservation purposes, economic diversification purposes, or community self-sufficiency purposes. The conveyance and transfer of land tracts would satisfy the DOE's obligations required by PL 105-119. The other suggested action alternatives would not satisfy these requirements. The "purpose and need" referenced by the commentor is best described as the intended purpose of PL 105-119, which is to provide Los Alamos County with the means for self-sufficiency, due to the end of assistance payments, and to transfer lands to the Pueblo of San Ildefonso. Section 1.1, Background Information, in Chapter 1 of the CT EIS, contains further information on the intended purpose of PL 105-119.

The congressionally mandated action considered in this CT EIS, namely, the conveyance and transfer of the land tracts, would meet the purpose and need for agency action set forth in Section 1.2 in Chapter 1 of the CT EIS and described above. The DOE does not consider whether or not the intended purpose of PL 105-119 is met. This would likely be determined by Congress, the County of Los Alamos, and the Pueblo of San Ildefonso.

The DOE received several suggestions regarding other alternatives to be evaluated in this CT EIS (for example, reinitiate the assistance payments without conveyance or transfer). These alternatives were considered but eliminated from detailed analysis, as described in Section 2.4 in Chapter 2 of the CT EIS, because they would not allow the DOE to meet its need to comply with the requirements of PL 105-119. Also see General Issue 3: Basis for DOE's Decisions.

General Issue 2: Deed Restrictions

Issue:

Commentors urged the DOE to ensure that future ecological and cultural resource protections for the parcels remain at their current levels. Specifically, many commentors were concerned that the proposed action would not provide adequate protection of threatened and endangered species and cultural resources. Commentors wanted the DOE to accomplish protection of these resources by placing restrictions in the instruments of conveyance or transfer so that any future development of the tracts would be limited in a manner that would maintain the ecological and cultural resources of the tracts. Commentors were concerned that both Los Alamos County and San Ildefonso Pueblo lacked the legal drivers, funds, or staff to adequately protect the existing natural and cultural resources. They also were concerned

[3] November 26, 2007, marks the end of the 10-year action period specified in Section 632 of PL 105-119.

that there appears to be no long-term resource protection of these lands if they are conveyed or transferred. Concern was expressed that development of these lands would adversely impact Bandelier and the Santa Fe National Forest and would not be in harmony with the existing natural setting. Commentors also wanted the DOE to ensure that the current recreational access to the tracts is continued and enhanced.

Response:

The DOE's authority to limit or condition the conveyance or transfer of the tracts at issue in the CT EIS is circumscribed by the provisions of PL 105-119. That statute directs the DOE to convey to the County of Los Alamos (or its designee) or transfer to the U.S. Department of the Interior (DOI) (in trust for the Pueblo of San Ildefonso) tracts of land in the Los Alamos area under its administrative control that meet the criteria set out in the statute. The provisions of PL 105-119 apply differently to conveyances to the County than they do to transfers to the DOI. These differences affect the manner in which ecological and cultural resources would be protected.

In the case of transfer to the DOI, the land would still be owned by the U.S. Government; only the administrative jurisdiction would be transferred from one Federal agency to another. See section 632(a)(2) of PL 105-119, presented in Appendix A. Thus, all applicable requirements governing activities on Federal land, including those for the protection of sensitive resources, would continue. Responsibility for interpreting and applying those requirements would rest with the DOI. It would be inappropriate for the DOE to attempt to place prior restraints on the DOI's ability to exert its authority in administering land under its jurisdiction.

In the case of conveyances to the County of Los Alamos, the DOE must convey to the County "fee" title[4] to the parcels of land. See section 632(a)(1) of the PL 105-119, presented in Appendix A. The DOE must work within this limitation in determining what, if any, conditions or restrictions can be included in the instruments of conveyance. The DOE may conclude that deed restrictions are not the most effective vehicle to preserve ecological and cultural resources. However, notwithstanding the limited authority conferred upon the DOE by PL 105-119, the DOE is required to consult with appropriate regulators concerning the protection of threatened and endangered species and cultural resources before conveying title to any tracts of land to the County. These consultations could lead to agreements between the DOE, the regulators, and the County on mitigation measures to be applied to minimize the potential for adverse impacts after conveyance of the land occurs. The DOE has contacted these regulators (see Chapter 18 of this CT EIS). The regulators have agreed that it will be most productive to defer further consultations until the County and the Pueblo of San Ildefonso have reached agreement on which recipient will receive which tracts of land. See section 632(e) of PL 105-119, presented in Appendix A. The land division process should be completed by November 1999. At that time, the DOE and the regulators will know which tracts will be conveyed to the County and thus will be the subject of consultations. These consultations will address the specifics of the mitigation measures. The Mitigation Action Plan (MAP) that the DOE will develop as part of its NEPA

[4] The term "fee" title speaks to the degree, quality, nature, and extent of interest that a person or entity holds in real property. Specifically, it is a contract term in real estate that means the holder is entitled to all rights incident to the property. There are no time limitations on its existence (it is said to run forever). The ownership of the land by a fee holder is complete and free of State domination (except the rights of the State of taxation, police power, and eminent domain).

compliance process will include this information.

The DOE does not have the authority under PL 105-119 to ensure continued recreational use of the tracts. Use of the land will be determined by the recipients. However, any interested party can contact the recipients and explore the question of continued recreational access.

General Issue 3: Basis for DOE's Decisions

Issue:

Commentors wanted the DOE to choose the No Action Alternative for some or all of the tracts, in whole or in part, based on the potential adverse impacts associated with the tracts' eventual use and development by the recipient parties. Commentors were concerned that if Los Alamos County received the land it would be fully developed, and the existing environmental and cultural resources would be lost. Commentors believed that if San Ildefonso Pueblo received the lands they would not be fully developed, and a better protection of resources would occur. For this reason, commentors also wanted the DOE to convey or transfer particular tracts to a particular recipient based on the difference in potential impacts to environmental or cultural resources.

Response:

The decision process regarding whether a particular tract of land will be conveyed or transferred was clearly defined by Congress in section 632 of PL 105-119. This section of PL 105-119 specifically directs that the tracts of land identified by the DOE in the report to Congress titled, "Land Transfer, A Preliminary Identification of Parcels of Land in Los Alamos, New Mexico for Conveyance or Transfer," if suitable, be transferred to the Secretary of the Interior in trust for the Pueblo of San Ildefonso or conveyed to the County of Los Alamos or their designee. See section 632(g) of PL 105-119, presented in Appendix A. The DOE's role in the process involves deciding whether the suitability criteria set by Congress in PL 105-119 have been met for each tract. If these criteria are met for a particular tract or portion of a tract, the portion of the tract that meets the suitability criteria will be conveyed or transferred. Moreover, the DOE has no role in deciding which recipient will receive a particular tract. This decision is to be made jointly by the County of Los Alamos and San Ildefonso Pueblo. See section 632(e) of PL 105-119, presented in Appendix A.

NEPA requires that an agency evaluate the No Action Alternative in the preparation of an EIS. The No Action Alternative reflects the status quo and provides a baseline against which the impacts of the various action alternatives may be compared. An agency's discretion to select the No Action Alternative may be limited or controlled by the enabling legislation under which the agency is operating. In this CT EIS, the No Action Alternative means that the DOE would decide to not transfer or convey individual tracts. Under PL 105-119, such a decision must be based on a determination that a tract does not meet one of the statutory criteria, and therefore, is not suitable to be transferred or conveyed. For example, the DOE could determine that the necessary environmental restoration or remediation cannot be completed within the 10 years allowed by the statute. See section 632(g)(3) of the PL 105-119, presented in Appendix A. However, the DOE cannot base a decision to select the No Action Alternative on any factor other than a failure of a tract to meet the criteria set out in PL 105-119, including such factors as potential adverse resource impacts.

The assessment of potential adverse impacts presented in this CT EIS can be used by the San Ildefonso Pueblo and the County to help them reach decision as to which party will receive which tract. In addition, the Pueblo and County can use the information to

guide future use and development decisions. As required by PL 105-119, the environmental impact information also will be part of the DOE report due to Congress regarding the tracts being considered for conveyance and transfer (the Combined Data Report). Thus, the information on potential adverse impacts will be part of the overall decisionmaking process.

General Issue 4: Public Law Process and the CT EIS

Issue:

Commentors believed that the proposed conveyance and transfer in general was unfair or that the process set by PL 105-119 was unfair. Specifically, commentors felt that the exclusion of potential recipients other than the Pueblo of San Ildefonso and the County of Los Alamos was unfair. Commentors requested that the DOE consider conveying land to a party other than the two specified in PL 105-119. Commentors believed that because PL 105-119 defines the steps to be taken by the DOE, an evaluation of all reasonable alternatives has not occurred. For this reason, commentors believed that the CT EIS does not fully encourage and facilitate public involvement in the decisionmaking process, which is the intent of NEPA. Commentors believed that PL 105-119 made the decision to bypass the NEPA process.

Response:

Congress enacted PL 105-119 to address a very specific issue: the self-sufficiency of the Los Alamos County. A review of the historical basis for this legislation places in context the process Congress chose to achieve this goal.

Under the *Atomic Energy Community Act* (AECA) of 1955 (42 U.S.C. §§2301-2394), the Federal Government recognized its responsibility to provide support for a specified period to agencies or municipalities that were strongly affected by their proximity to facilities that are part of the nation's nuclear weapons complex while they achieved self-sufficiency.

These facilities were three so-called Atomic Energy Communities: Oak Ridge, Tennessee; Richland, Washington; and Los Alamos, New Mexico. Each of these communities was established as a wholly government-owned community in which all municipal, educational, medical, housing, and recreational facilities were provided by the Federal Government. Under the AECA, national policies were established regarding the obligations of the United States to the three Atomic Energy Communities. These policies were directed at terminating Federal Government ownership and management of the communities by facilitating the establishment of local self-government, providing for the orderly transfer to local entities of municipal functions, and providing for the orderly sale to private purchasers of property within these communities with a minimum of dislocation. The establishment of self-government and transfer of infrastructures and land were intended to encourage self- sufficiency of the communities through the establishment of a broad base for economic development.

In spite of all efforts to the contrary, the transfer and self-sufficiency process has been slower for Los Alamos than for other Atomic Energy Communities, due to its unique nature and location.

In June of 1996, the DOE submitted a report to Congress concerning the assistance payments to the County (see Section 1.1.2 in Chapter 1 of the CT EIS). In that report, the DOE recommended that:

- The historically paid annual assistance payment be discontinued with a final lump-sum settlement of $22.6 million,
- The DOE transfer to the County several municipal installations and

functions under its administration and operation, and

- That the DOE transfer to the County undeveloped land that could be utilized by the County or developed by private interest to increase the County's revenue from property and gross receipts tax.

In October 1996, Congress enacted legislation (the *Energy and Water Development Appropriations Act* of 1997) to terminate the annual assistance payments to the County by mid 1997, with the recommended lump-sum termination payment. Disposition of municipal functions and installations (the water system, fire stations, and lease of the Airport) were begun in 1997.

Congress completed the steps considered necessary to provide self-sufficiency for Los Alamos in keeping with the last of the recommendations made in the June 1996 report to Congress by enacting PL 105-119. The same legislation provided for land to be transferred to the DOI, in trust for the San Ildefonso Pueblo, that had been used by the Pueblo prior to the creation of LANL.

PL 105-119 was drafted with input from the DOE, San Ildefonso Pueblo, and the County of Los Alamos. It is customary for Congress to consult with parties affected by prospective legislation. However, Congress ultimately prescribed both the results to be accomplished by the statute and the process to be followed in accomplishing those results. That process was specified in substantial detail. These details included the potential recipients, criteria for determining the suitability of parcels of land for conveyance or transfer, setting the steps for implementing the process, setting the timetable for implementing the process, and the roles and responsibilities of the parties involved. The DOE is obligated to adhere to these requirements and carry out its role as mandated by PL 105-119. While the NEPA process includes addressing public concerns and comments regarding the proposed action, the DOE does not have the authority to modify the requirements of PL 105-119. Only Congress can address changing the process or details of the process by amending PL 105-119.

A NEPA analysis is based on the authority and limitations imposed by the enabling legislation; this does not invalidate the NEPA process, but may narrow the scope of the analysis. Congress could have provided that a more broadly scoped EIS be prepared by granting the DOE more discretion in implementing the statute. Conversely, Congress could have removed all discretion and required that the DOE carry out a mere ministerial conveyance and transfer action, thereby negating the applicability of NEPA. However, Congress gave the DOE a limited decisionmaking role, and that role is reflected by the scope of this CT EIS. For example, the alternatives analyzed in the CT EIS (that is, to convey or transfer each tract, or no action) are appropriately tailored to the underlying legislation for this action.

Although there is limited involvement by the DOE in the conveyance and transfer decisions, Congress instructed the DOE to proceed with the NEPA process to evaluate the potential environmental impacts associated with the conveyance and transfer action. (See section 632(d)(1)(B) of PL 105-119, presented in Appendix A). While the CT EIS may only play a limited role in the overall decisions made by the DOE, it fulfills the intent of NEPA. It informs the public of the impacts of the proposed action. Moreover, it can be used by the Pueblo and the County to help reach their decision as to which party will receive which tract, and to what use they will ultimately put the land. Finally, the DOE will use the CT EIS analyses as part of the report to Congress on the suitability of the tracts for conveyance and transfer. (See section 632(d)(1)(C) of PL 105-119, presented in Appendix A.) These uses of the

CT EIS analyses fulfill the intent of the NEPA process to inform the decisionmakers and promote better decisionmaking. The process through which this CT EIS has been prepared also fulfills the intent of NEPA to inform the public in a timely manner so that the public can provide input to the decisionmaking process.

General Issue 5: Environmental Restoration Process

Issue:

Commentors presented concerns or questions about details of the environmental restoration activities that will take place on each of the tracts, such as the timetable for cleanup and the setting of cleanup levels Commentors were concerned that the CT EIS does not adequately address the environmental remediation that may be necessary for these tracts. Questions were raised about the DOE being able to certify that contaminants were cleaned up to the level of specified use. Concern also was expressed that cleanup levels for use of the land for cultural preservation purposes would be less than the level of cleanup for residential use.

Response:

Under the requirements of PL 105-119, the DOE is required to clean up each tract, to the maximum extent practicable, before it can be conveyed or transferred. The DOE, through the LANL Environmental Restoration Project, is conducting a separate process for site cleanup. This process will involve the public and State and Federal regulatory agencies to determine the appropriate level of cleanup to be undertaken for the each tract, the technical manner in which it will be achieved, and the priority of the cleanup actions. This separate process will include the DOE's NEPA review of the cleanup actions as details are developed and they become ripe for decision.

Currently, there is not enough detail known regarding the cleanup required for each of the tracts to pursue the NEPA compliance action(s). When the regulators and the public have reviewed and approved the various types of remediation and restoration under consideration, the DOE will then be in a position to pursue the NEPA compliance review necessary.

The CT EIS presents the information available to the DOE concerning the potential environmental restoration of the tracts proposed for conveyance and transfer. The cleanup of most of these tracts was already in the preliminary stages or had been completed before they were identified for the proposed conveyance and transfer action. Plans for completing the cleanup of the tracts will be dynamic and are subject to revision and change as additional information becomes available. This is especially true for plans dealing with buildings that are currently in service and contain asbestos or other hazardous materials requiring decontamination before demolition may be undertaken. Plans also will be developed to address the issue of cleanup of floodplain areas that may receive contamination washed downstream from other areas. To the extent known or anticipated, information on environmental restoration and remediation impacts is included in this CT EIS.

Because the details of the future cleanup activities associated with these tracts are unknown, this CT EIS presents information intended to bound the potential environmental impacts. The environmental information on restoration provided in this CT EIS (see Appendix B) is based on the DOE's Environmental Restoration Report, which is being produced to meet the DOE's requirements under section 632 of PL 105-119. This section of PL 105-119 requires the DOE to identify any environmental remediation or restoration necessary on the tracts considered for conveyance and transfer and to then supply

this information in a report to Congress together with the environmental impact information. The Environmental Restoration Report seeks to bound the amounts of wastes generated, the costs of the cleanup activities that will occur in the future, and the durations of cleanup actions, even though the exact details of these cleanup activities are currently only estimated. The DOE's proposed remedies and estimates of projected waste volumes, cleanup costs, and cleanup duration presented in the Environmental Restoration Report are based on site knowledge and characterization data as they exist today. These projections also are based on the DOE's understanding of the types of cleanup strategies and the cleanup levels that are generally acceptable to the regulators as meeting the RCRA corrective action requirement by which LANL is regulated.

Comments on the Environmental Restoration Report have been forwarded to LANL Environmental Restoration Project personnel. These comments were incorporated into the Final Environmental Restoration Report, and letters were sent to the commentors. To find more information about the LANL Environmental Restoration Project or about the restoration or remediation of the subject tracts, please contact Mr. Ted Taylor at the DOE Los Alamos Area Office, 528 35th Street, Los Alamos, New Mexico 87544; or call (505) 665-7203.

General Issue 6: Environmental Justice

Issue:

Commentors believed that the CT EIS did not fully evaluate the environmental justice impacts to the nearby minority populations. Commentors stated that the potential adverse impacts discussed in the CT EIS were not discussed as environmental justice impacts to the people of San Ildefonso Pueblo. Commentors believed that the CT EIS recognizes adverse impacts on traditional and cultural resources but does not see these impacts as disproportionately affecting the Pueblo of San Ildefonso and therefore does not recognize an environmental justice impact. The commentors address specific concerns about the protection of Tewa Pueblo shrines and traditional cultural practices on four of the tracts. Commentors maintain that cultural preservation land uses would protect these resources better than the other contemplated uses. Commentors viewed the potential impacts on Tewa Pueblo shrines, artifacts, and traditional cultural practices associated with the other contemplated land uses as causing a disproportionately high and adverse effect on a minority population that should be addressed in the CT EIS as an environmental justice impact.

Response:

The DOE has evaluated the impacts associated with land use, transportation, infrastructure, noise, visual resources, socioeconomics, ecological resources, geology and soils, water resources, air resources, and human health and has not identified any disproportionately high and adverse human health or environmental impacts on minority or low-income populations. However, for TCPs the analysis has not been completed.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," and its accompanying memorandum to the heads of departments and agencies directed each agency to take impacts to minority and low-income communities into account in their decisionmaking processes. Specifically, these impacts were to be evaluated during the NEPA process. The Council on Environmental Quality (CEQ) has oversight responsibility for Federal agencies compliance with Executive Order 12898 and NEPA. The CEQ has issued guidance on evaluating environmental justice through the NEPA process. The DOE has followed this

guidance in evaluating the environmental justice issues in both this CT EIS and the 1999 Site-Wide EIS (SWEIS) for LANL from which this CT EIS tiers and references.

In accordance with CEQ guidance, this CT EIS evaluates the potential for environmental impacts that would have disproportionately high and adverse impact on the low-income or minority communities in the region (see Section 4.2.13 in Chapter 4 of the CT EIS). Most of the potential adverse environmental impacts discussed in this CT EIS, such as those associated with utilities and threatened and endangered species, would affect all populations in the area equally, and thus, would not have a disproportionately high and adverse impact to minority or low-income communities in the region. Other potential adverse impacts, such as those associated with traffic, would affect the townsite area, which has a relatively low percentage of minority and low-income populations (see Section 3.2.13 in Chapter 3 of the CT EIS), and thus, would not disproportionately affect low-income or minority populations.

As part of its human health impacts analysis, the LANL SWEIS looked at potential exposure through special pathways, including ingestion of game animals, fish, native vegetation, surface waters, sediments, and local produce; absorption of contaminants in sediments through the skin; and inhalation of plant materials. For LANL, the special pathways are important to the environmental justice analysis because some of these pathways are more important or viable to the traditional or cultural practices of minority populations in the area. Even considering these special pathways, the SWEIS did not find disproportionately high and adverse health impacts to minority or low-income populations.

Steps taken to protect minority populations and others living in the vicinity of LANL are described throughout the SWEIS. In Volume I of the SWEIS, Chapter 4 discusses the affected environment and includes descriptions of ongoing environmental surveillance and compliance programs, the worker protection program, and the emergency preparedness and response program. Chapter 5 analyzes exposure to the maximally exposed individual (MEI), recognizing that through limiting the dose to individual members of the public, the entire population is better protected. Chapter 6 addresses the programs and activities that mitigate impact to the public, as well as additional mitigation measures being considered by DOE in conjunction with the SWEIS process.

The following are specific LANL community issues and areas that are associated with the analysis of environmental justice.

- **Area Pueblos:** San Ildefonso, Santa Clara, Jemez, Cochiti, San Juan, Pojoaque, Nambe, and Tesuque
- **Predominately Hispanic Communities:** El Rancho, Jacona, Jaconita, Guachupangue, Española (Traditional Hispanic communities also can be artisan guilds, rural development organizations, and acequia associations [irrigation water distribution system associations].)
- **Topics of Concern:** Human health (LANL emissions and contaminants), economic (effects from LANL projects), and social (project effects on the fabric of a community and TCPs)
- **TCPs:** Significant place or object associated with historical and cultural practices or beliefs of a living community that is rooted in that community's history and is important in maintaining the continuing cultural identity of the community
- **General Categories of TCPs:** Ceremonial and archaeological sites, natural features mentioned in stories

and legends, plant gathering areas (plants for ceremonial, medicinal, and artisan purposes), clay procurement areas (hunting areas and acequias) (TCPs are not restricted to Native American groups. For example, traditional Hispanic communities also maintain religious practices, arts and crafts traditions, folklore, and traditional medical practices.)

- **Subsistence and Other Consumption Issues:** Cattle grazing, deer and elk hunting, plant cultivation and wild plant gathering, fishing; "special exposure pathways" (ingestion, inhalation, dermal contact); limiting access; and quantifiable data

Potential impacts to cultural resources could have a disproportionate adverse affect to the minority communities in the region. However, while archaeological and historic resources have been evaluated, the evaluation of traditional cultural properties (TCPs) or sites has not been completed. The DOE initiated consultation with the Native American Pueblos in the region on TCPs associated with the tracts in July 1998, and additional correspondence was sent on March 30, 1999, to 23 area Pueblos and tribes (see Appendix E, Section E.3.2 of the CT EIS for additional discussion). Consultations initiated as part of the CT EIS are still ongoing.

The DOE recognizes that TCPs could exist on the tracts and that these might be affected by the uses for these tracts identified by the recipient parties. Without the consultations the DOE cannot ascertain whether TCPs are present on an individual tract or the degree to which those TCPs could be potentially impacted. Without assessment of the impacts the DOE cannot determine whether those impacts would have a disproportionately high and adverse effect on any minority or low-income communities. In the discussions of cultural resources and environmental justice for each tract, the DOE includes a statement that TCPs could be present and that they could be impacted by the land uses being evaluated. The DOE will continue with the required consultation process associated with cultural resources and TCPs.

The DOE acknowledges that there are different approaches that could be used to assess environmental justice impacts. Some groups may view any and all impacts as significant, others may accept a higher level of risk.

Chestnut Law Offices, legal counsel for the Pueblo of San Ildefonso, submitted comments on behalf of the Pueblo that expressed the belief that the conveyance or transfer process would have environmental justice impacts on their population, specifically,

> "...the CT EIS does not recognize the impact upon these shrines [Tewa Pueblo] and usage of the area by Native American population under the County's proposed usages of increased recreational access, and residential and commercial development. The Pueblo views the effect on the shrines, artifacts and traditional cultural usage as a disproportionate adverse impact on a minority population..."

This comment notwithstanding, the DOE considers that is has met the objectives of Executive Order 12898 to investigate environmental justice impacts that would be potentially high and adverse and would disproportionately affect one group over another in these Final CT EIS analyses.

General Issue 7: Homesteaders Association Claims

Issue:

Commentors expressed their belief that the DOE should give the land back to the

families who once owned or homesteaded the land and not to the County or the Pueblo of San Ildefonso. Commentors stated that homesteaders still have a claim to the land that was taken from them in the Los Alamos area. Commentors believed that the U.S. Government took the land from the homesteaders without just compensation. Commentors believed that the title search report for the tracts of land to be conveyed or transferred was not valid or complete. Commentors also believed that the DOE has not addressed the homesteaders' claims.

Response:

The DOE has been in communication with the Homesteaders Association of the Pajarito Plateau (Homesteaders Association). The Homesteaders Association is composed of people who were the homesteaders, or owners, or descendents of the original homesteaders or owners of land in the Los Alamos area that the U.S. Government condemned or purchased in the 1940s in order to conduct the Manhattan Project.

In 1942, the Undersecretary of War directed that the land needed in the area be acquired. In April 1943, the Secretary of Agriculture granted authority to the Secretary of War for the War Department to occupy and use, for as long as the military necessity existed, federally owned land under the jurisdiction of the U.S. Forest Service. This involved withdrawal of grazing permits. The holders of the grazing permits were compensated based on the number of grazing stock.

The process prescribed for acquiring privately owned land was by condemnation or purchase. Authority for condemnation of private lands was contained in the *Second War Powers Act*. Under the *Second War Powers Act*, the government filed a Petition in Condemnation that resulted in an Order of Possession served by the court on the land owner, who then had to vacate. To acquire the land permanently, a Declaration of Taking was filed by the government, and appraisals were made by an appointed commission. If the appraisal was not approved by both the land owner and the government, the case was settled in the U.S. District Court. The land was acquired in fee simple by filing Declaration of Taking proceedings because there was not enough time to negotiate with each owner and because condemnation proceedings were necessary to eliminate the numerous title defects that existed.

The Homesteaders Association families were compensated at that time. The Homesteaders Association members are now interested in regaining all of these lands or receiving additional compensation for the lands. The Homesteaders Association interest includes some of the land being considered for conveyance and transfer.

While no written claim for any of the land being considered for conveyance and transfer has been submitted to the DOE, the issue was researched. Only the Rendija Canyon Tract has any land that was once the site of a homestead. Approximately 10 percent or around 90 acres (40 hectares) of the Rendija Canyon Tract was formerly privately owned.

As required by PL 105-119, the U.S. Army Corps of Engineers (COE) has researched the title to all of the land tracts and the DOE submitted the resulting title opinions in a report to Congress. The COE concluded that the U.S. Government condemned these lands properly or purchased them properly and has clear title to the land tracts being considered for conveyance and transfer.

Environmental Impacts

The environmental impacts of the proposed conveyance and transfer of the 10 land tracts are described below. The assumptions associated with the analysis of impacts are provided. The impacts are broken into direct and indirect impacts. The impacts of the No Action Alternative are compared to the impacts projected to result from

implementation of the Proposed Action Alternative in Table S-2, provided at the end of this section. As an aide to the reader, Table S-3 (also provided at the end of this section) presents a summary of the impacts of the Proposed Action Alternative on a tract-by-tract basis. The environmental impacts of the Preferred Alternative, based on current information, would be expected to be between those presented for implementation of the Proposed Action and the No Action Alternatives for each tract.

Analysis of Impacts

The land tracts are part of LANL with the exceptions of the Rendija Canyon and Miscellaneous Manhattan Monument Tracts. Because the tracts are part of or near LANL, the information contained in the LANL SWEIS (DOE 1999c) analysis is used with regard to environmental resources or existing conditions in the CT EIS. The four alternatives analyzed in the SWEIS relate to varying levels of operations at LANL. The TA 21 Tract has the only facilities analyzed in the SWEIS that are located on the subject tracts, while the other tracts are either excluded from the SWEIS analysis or remain unchanged in land use across the SWEIS alternatives. The SWEIS Preferred Alternative is used as the basis for the CT EIS No Action Alternative because it provides a reasonable upper "bounding analysis" of impacts regarding those resources of concern. This approach assures that the CT EIS has not underestimated the potential impacts that may result from the conveyance and transfer of the subject tracts.

Implementing the SWEIS Preferred Alternative would maximize use of electric power due to expanded LANL operations; more people being hired, mostly for long-term employment; and more LANL workers being exposed to radioactive materials and processes. In particular, the level of use of utilities (such as electricity and natural gas), waste management and disposal facilities, and groundwater resources are greater in the SWEIS Preferred Alternative.

Timeframe of Analyses

The schedule for conveyance or transfer of each tract, either in whole or in part, and the potential recipient's eventual development of the tracts cannot be accurately determined at this time. Therefore, the relation of those schedules to the schedule for full implementation of the activities described in the SWEIS Preferred Alternative also cannot be evaluated. In order to provide bounding analyses, it is assumed in this CT EIS that the SWEIS Preferred Alternative has already been fully implemented, and all of the tracts are conveyed or transferred and developed within the next 10 years. This assumption, while ensuring the analyses of impacts bounds those likely to occur, may be overly conservative in some cases. Those cases where the analyses may be overly conservative (for example, in estimating when utility demand may exceed capacities) will be identified.

Direct and Indirect Impacts

Once the land tracts are conveyed or transferred, they will pass beyond the administrative control of the DOE. All subsequent use of the land will be independent of the DOE. Therefore, for the purpose of this CT EIS, all impacts associated with actions that would be undertaken by the DOE due to the proposed conveyance and transfer of the land tracts are described as direct impacts. All subsequent impacts resulting from actions undertaken by the recipients after the proposed conveyance and transfer of the tracts are described as indirect impacts.

Comparison of Direct Impacts

A comparison of the impacts of the No Action Alternative and the impacts projected to result from implementation of the Proposed

Action Alternative are presented in Table S-2, provided at the end of this section. The direct and indirect impacts of the Proposed Action Alternative are also discussed below. The impacts of the No Action Alternative are detailed where they differ from those presented in the SWEIS.

The direct impacts of the proposed conveyance and transfer of the subject tracts consist of those associated with the relocation of DOE LANL operations and personnel who currently reside on the various tracts. Employees requiring relocation could be moved to existing buildings on other parts of LANL property, or new buildings could be constructed. These plans are not ripe for decision. Any decision regarding construction of new facilities would be preceded by appropriate NEPA review.

There would be no difference in direct impacts between the conveyance and transfer of the tracts and the No Action Alternative in infrastructure, noise, visual resources, socioeconomics, geology and soils, water resources, or human health.

The differences between the direct impacts of the conveyance and transfer of the tracts and the No Action Alternative in land use, transportation, ecological resources, cultural resources, and air resources are discussed by affected resource in the following paragraphs.

Land Use

Under the No Action Alternative, no specific changes in land use or direct impacts are anticipated. Completion of environmental restoration activities, including decontamination, decommissioning, and possible demolition of DOE facilities may allow possible changes in future land use. Environmental restoration activities would proceed in accordance with existing and developing plans. Worker impacts associated with environmental restoration activities cannot be projected at this time. Environmental restoration activities would be subject to their own DOE NEPA review.

Under the Proposed Action Alternative, the conveyance and transfer of the tracts in whole or in part, no specific changes in land use or direct impacts are anticipated. In general, environmental restoration activities are independent of the conveyance and transfer process; but, the conveyance and transfer scenarios may influence decisions on the timing, cleanup levels, and the inclusion of certain buildings in environmental restoration activities. The waste estimates would be roughly the same as for the No Action Alternative.

Transportation

Under the No Action Alternative, no specific changes in direct impacts in transportation are anticipated.

Under the Proposed Action Alternative, direct consequences of the conveyance and transfer of the tracts include small alteration of the overall daily commute. DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts would have to change their commuting routes. Some DOE and contractor personnel may have a shorter drive to work, those living in White Rock for example; but, most would have farther to travel.

Ecological Resources

Under the No Action Alternative, no specific changes in direct impacts to ecological resources are anticipated.

Direct impacts of the Proposed Action Alternative, the conveyance and transfer of the tracts, are limited to the changes in responsibility for resource protection. Environmental review and protection processes and procedures for future activities would be different from those that are currently governing the subject tracts and may not be as rigorous. The LANL Threatened and

Endangered Species Habitat Management Plan would no longer be in effect for those tracts occupied by or containing suitable habitat for endangered species.

Cultural Resources

Under the No Action Alternative, no specific changes in direct impacts to cultural resources are anticipated.

Direct impacts of the Proposed Action Alternative, the conveyance and transfer of the tracts, are limited to the potential transfer of known and unidentified cultural resources and historic properties out of the responsibility and protection of DOE. Under the Criteria of Adverse Effects (36 CFR 800.5(a)(1), the transfer, lease, or sale of resources eligible for listing on the National Register of Historic Places (NRHP) is an adverse effect. NRHP eligible resources are present on nine of the tracts being assessed in this CT EIS, and would be directly impacted by the Federal action. The disposition of each of the subject tracts also may affect the protection and accessibility to Native American sacred sites or sites needed for the practice of traditional religion by removing them from consideration under the *American Indian Religious Freedom Act, Religious Freedom Restoration Act,* and Executive Order 13007, "Indian Sacred Sites." In addition, the disposition of the tracts would potentially affect the treatment and disposition of any human remains, funerary objects, sacred objects, and objects of cultural patrimony that may be discovered on the tracts, under the *Native American Graves Protection and Repatriation Act*.

Air Resources

Under the No Action Alternative, no specific changes in direct impacts in air resources or global warming are anticipated.

Direct consequences of the Proposed Action Alternative, the conveyance and transfer of the tracts, include small alteration of the overall daily commute. DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts would have to change their commuting routes. Some DOE and contractor personnel (for example, those living in White Rock) may have a shorter drive to work; but, most would have farther to travel. This would result in slightly greater emissions.

Comparison of Indirect Impacts

Indirect impacts are anticipated from the subsequent uses contemplated by the receiving parties for several of the 10 tracts (see Table S-3 at the end of this section). The receiving parties have identified a combination of contemplated uses for the tracts after conveyance or transfer. These uses include development of part or all of some of these tracts. Estimates of the development acreage reflect the best available information on the footprint of the contemplated developments. This acreage may include the redevelopment of disturbed land as well as the new use of relatively undisturbed areas. The impact analysis assumes that these footprints represent an approximation of areas that would be developed but that may not include all areas that would otherwise be disturbed. Likewise, there are no specific acreage estimates for land that may be disturbed or developed for land uses that include undefined improvements to utilities or recreational areas. These areas are qualitatively addressed in the impact analysis.

Land Use

Under the No Action Alternative, no specific changes in land use or indirect impacts are anticipated.

Under the Proposed Action Alternative, the indirect impacts of the conveyance and transfer of the tracts include regional changes in land use, such as the development of forest, grazing, and open-space land for residential and commercial uses. Future land use

patterns could change on several tracts. Approximately 826 acres (335 hectares) of the total acreage proposed for transfer and conveyance could be developed or redeveloped for other uses.

There is the potential for the introduction of land uses that would be incompatible with adjacent landowners' resource protection efforts. There may be loss of recreational opportunities currently enjoyed on some tracts.

While cumulative impacts to land use affect only a small percentage of the total region, many of the anticipated impacts are concentrated in the vicinity of Los Alamos, LANL, and White Rock and therefore could appear substantial.

Transportation

Under the No Action Alternative, no specific changes or indirect impacts in transportation are anticipated.

Under the Proposed Action Alternative, the conveyance and transfer of the tracts, commercial, industrial, and residential developments would greatly increase the number of trips generated. Peak-hour traffic entering or exiting 6 of the 10 tracts could increase by a range of approximately 751 to 3,775 trips. There could be a positive regional traffic impact in that more LANL employees could live in Los Alamos and reduce overall commuter traffic from other areas.

Cumulative impacts to regional transportation include substantial increases in overall regional and local traffic that would require improvements to traffic controls, new roads, road widening, and bridges. The anticipated impacts to transportation would be expected to be concentrated near the Los Alamos townsite and the LANL area.

Infrastructure

Under the No Action Alternative, the electrical system is already at the limits of its capacity. With the addition of the SCC and other regional developments, the electrical power demand will exceed system capacity.

Under the Proposed Action Alternative, the total estimated increases in utility usage associated with the development of the tracts would be as follows:

- Electricity use: 32 gigawatt-hours (gwh)
- Peak power: 6 megawatts (mw)
- Natural Gas: 459 million cubic feet (mcf) (13,000 million liters per year [mly])
- Water: 382 million gallons per year (mgy) (1,446 mly)
- Solid Waste: 2,385 tons per year (tpy) (2,163 metric tons per year [mty])

Increases in discharges to wastewater treatment plants could be 132 mgy (500 mly) for the Bayo Wastewater Treatment Plant and 41 mgy (155 mly) for the White Rock plant.

The increase in peak electricity demand is in addition to the already anticipated exceedance of the capacity of the electrical power system. Water usage demand is projected to exceed water rights. The natural gas delivery systems may have to be upgraded to handle the increased demand. The existing wastewater treatment capacity is expected to be exceeded. Solid waste production is expected to reduce the expected life of the regional landfill. However, given the conservative assumptions used in the calculations and the phased approach in the development of the tracts, the actual utility usage may not reach capacity limits within the next 10 years.

Noise

Under the No Action Alternative, no specific changes in indirect impacts in noise are anticipated.

Under the Proposed Action Alternative, ambient noise levels would be expected to increase above current levels for most of the contemplated land uses. Ambient noise levels associated with cultural preservation may decrease, and noise levels associated with natural areas would be expected to remain the same or increase slightly. Noise associated with transportation and utility corridors would remain the same or could increase with additional infrastructure construction and use. Demolition and construction activities would be expected to temporarily elevate noise levels on the tracts from the No Action Alternative levels to a range of 74 to 95 decibels (dB) on the A-weighted scale (dBA). Residential uses typically would result in ambient noise levels between 50 and 70 dBA depending on traffic, density, and location. Commercial and industrial land uses typically would result in 60 to 70 dBA. Noise would be present during a greater part of the day than currently on the tracts that are developed for residential, commercial, and industrial land uses. Overall noise from vehicular traffic would increase.

Visual Resources

Under the No Action Alternative, no specific changes in indirect impacts in visual resources are anticipated.

Under the Proposed Action Alternative, most of the tracts would maintain their current level of visual aesthetic value after conveyance and transfer and any subsequent development. However, the development of currently undeveloped areas, such as the Rendija Canyon and White Rock Tracts, would typically degrade the visual landscape. The reduction in visual quality would not be substantial on a regional scale, but local diminished viewsheds could impact resources important to maintaining a positive visitor experience on adjacent NPS lands.

Socioeconomics

Under the No Action Alternative, no specific changes in indirect impacts in socioeconomics are anticipated.

Under the Proposed Action Alternative, short-term economic gains would be expected from employment due to construction activities for new development. Long-term gains would depend on the intensity and success of the development. Depending on the scenarios implemented, 320 businesses could be developed on the tracts, employing up to 6,080 workers and generating a total of 8,957 jobs within the region of influence (ROI). As many as 2,360 residences could be placed on the tracts, increasing White Rock and Los Alamos population by 6,620 residents.

Overall impacts to employment, income, population, and housing would be minor within the ROI, but would be concentrated in the Los Alamos area. Improvements would be expected in the Los Alamos County tax base but would probably not offset the loss of assistance payments, according to information provided by the County (see Chapter 18, Section 18.1).

Ecological Resources

Under the No Action Alternative, no specific changes in indirect impacts in ecological resources are anticipated.

Under the Proposed Action Alternative, development footprints for the 10 tracts include approximately 770 acres (312 hectares) of relatively undisturbed habitat, primarily ponderosa pine forest and pinyon-juniper woodland. Contemplated uses also would be expected to degrade large amounts adjacent habitat, including preferred habitat for the American peregrine falcon and the Mexican spotted owl.

Highly mobile wildlife would be forced to relocate to adjacent undeveloped areas. However, successful relocation may not occur due to increased competition for limited

resources. For less-mobile species, direct mortality could occur during the actual construction or from habitat alteration. Habitat modification could affect several Federal-listed threatened and endangered species. Development in some tracts could result in direct loss of wetland structure and function with potential increased downstream and offsite sedimentation. The current lack of a natural resources management plan by either the County of Los Alamos or the Pueblo of San Ildefonso would impede the development of an integrated, multiagency approach to short- or long-term natural resource management strategies. Additionally, transfer of the land tracts may result in a much less rigorous environmental review and protection review process for future activities because neither the County of Los Alamos nor the Pueblo of San Ildefonso have regulations that would match the Federal review and protection process. Cumulatively, the development could result in fragmentation of habitat and disruption of wildlife migration corridors.

Cultural Resources

Under the No Action Alternative, no specific changes in indirect impacts in cultural resources are anticipated.

Under the Proposed Action Alternative, the development of approximately 826 acres (335 hectares) and use of tracts for recreation could result in physical destruction, damage, or alteration of cultural resources on the subject tracts and in adjacent areas and disturbance of traditional religious practices.

Geology and Soils

Under the No Action Alternative, no specific changes in indirect impacts in geology and soils are anticipated.

Under the Proposed Action Alternative, soil would be disturbed by development, new road building, and utilities. Removal of vegetation and increased runoff from new impermeable surfaces could increase erosion. The cumulative impacts to geology and soils would be insubstantial.

Water Resources

Under the No Action Alternative, no specific changes in indirect impacts in water resources are anticipated.

Under the Proposed Action Alternative, supplies of groundwater would be reduced, potentially accelerating drawdown of the main aquifer. Placement of new water supply wells could impact groundwater quality. New development could potentially degrade the surface water quality by increasing the pollutant loads and surface runoff volumes from construction activity, and by creating additional impermeable surfaces such as roads and parking lots.

Air Resources

Under the No Action Alternative, no specific changes in indirect impacts in air resources are anticipated.

Under the Proposed Action Alternative, there would be increases in criteria pollutants from mobile sources and homes using natural gas or propane. Slight increases in emissions of hazardous air pollutants would be expected from the development of new industrial facilities. The current contributions to global climate change from the land tracts would increase more than 25-fold over the No Action Alternative due to motor vehicle traffic and residential use of fossil fuels. Additional use of artificial lighting could impact the visibility of the night sky.

Human Health

Under the No Action Alternative, no specific changes in indirect impacts in human health are anticipated.

Under the Proposed Action Alternative, as many as 900 new residents could be brought into closer proximity to LANL facilities at the

DOE LAAO and DP Road Tracts, and another 2,200 residents and lodgers at the White Rock Tract. Commercial development could bring as many as 6,000 private-sector employees into existing one-half mile radiation site evaluation circles at the DP Road, TA 21, and Airport Tracts (discussion of these "circles" is provided in Chapter 4, Section 4.2.12.2, of the CT EIS). While the maximally exposed individual doses would not increase, these developments would mean increased total population exposures to radiological and chemical emissions from normal LANL operations and hypothetical accidents. A substantial increase in the public collective radiation dose and latent cancer fatalities would result. Risk of developing excess latent cancer fatalities on the subject tracts from accident events could maximally increase from about 57 excess cancer deaths to about 98 excess cancer deaths.

Development of the tracts by the recipients would involve construction with its attendant risks to workers. Should the development include industrial activities, these activities would involve commensurately greater worker risks.

Environmental Justice

There would be no environmental justice impacts under the No Action Alternative.

No direct adverse effects on minority or low-income populations would be expected under the Proposed Action Alternative. Indirect impact to TCPs potentially may cause disproportionately high or adverse effects on minority or low-income communities, but these effects cannot be determined at this point in the consultation process. The Homesteaders of the Pajarito Plateau and legal counsel for the Pueblo of San Ildefonso have expressed the belief that the conveyance or transfer and contemplated uses would have additional environmental justice impacts on their populations.

Mitigation Measures

Mitigations are actions or activities that can be taken to avoid, minimize, rectify, or compensate for anticipated impacts.

Mitigations Prior to Conveyance or Transfer

Prior to conveyance or transfer of any of the land tracts, the DOE will initiate cultural resource consultations with the affected Pueblos and tribal nations and the State Historic Preservation Office(r), and complete consultation regarding threatened or endangered species or their habitat with the U.S. Fish and Wildlife Service (USFWS). In the case of conveyance of land tracts to the County, the DOE may include deed restrictions precluding any development within the 100-year floodplains or wetlands consistent with the provisions of PL 105-119.

Recommended Mitigations

The DOE will coordinate consultations with the New Mexico State Historic Preservation Office(r), Advisory Council on Historic Preservation, receiving parties, and other interested agencies and parties to engage consideration of impacts on cultural resources resulting from the conveyance and transfer of the subject tracts from the responsibility and protection of the DOE. The goal of these consultations would be a formal Memorandum of Agreement (MOA) addressing the impacts of the potential loss of certain cultural resource protections and DOE responsibilities on the subject tracts, and defining specific procedures and responsibilities for managing cultural resource concerns upon transfer to the receiving parties. For example, the parties could consider the implementation of covenants that would ensure identification of all resources before development, minimization of the impacts to cultural resources, and protection of the rights of Native Americans regarding traditional

religious practices. Other agreements among the parties could include development of agreements concerning threatened or endangered species habitat, integrated resource management plans, integrated emergency response plans, and future land use options.

Potential Resource-Specific Mitigations

Chapter 16 of the CT EIS provides a large list of potential mitigation measures that were developed for each resource area. The mitigation measures suggest how specific aspects of individual impacts could be avoided or minimized. These potential measures range from seeking additional resources to offset predicted shortfalls in power and water supplies; providing new access and rights of way for neighboring land owners and utilities; and establishing habitat buffer zones through conservation programs, maintenance of natural vegetation, and erosion control; to implementation measures to control dust during construction.

Table S-2. Comparison of Impacts of the Alternatives

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Land Use	Current mission support, research and development and LANL activity buffer land uses would continue on the 10 subject tracts.	Implementation of the Proposed Action Alternative would cause regional changes in land use, including the development of forest and open-space land for residential, commercial, and industrial uses and dedication of tracts for cultural preservation or as natural areas. Approximately 826 acres (335 hectares) of the total acreage could be developed or redeveloped for other uses. There is the potential for the introduction of land uses that would be incompatible with adjacent landowners' resource protection efforts. There may be a loss of recreational opportunities associated with changes in land use. While cumulative impacts to land use affect only a small percentage of the total region, many of the anticipated impacts are concentrated in the vicinity of Los Alamos, LANL, and White Rock and, therefore, could appear substantial.
Environmental Restoration	Environmental restoration activities would proceed in accordance with existing and developing plans and would be subject to their own NEPA review. Worker impacts associated with environmental restoration activities cannot be projected at this time. Completion of environmental restoration activities, including decontamination, decommissioning, and possible demolition of DOE facilities on these tracts would result in preliminary projected waste volumes of up to 207,860 cubic yards (158,820 cubic meters). These include 42,300 cubic yards (32,320 cubic meters) for the cleanup of PRSs; 61,970 cubic yards (47,350 cubic meters) for the D&D of structures and 103,590 cubic yards (79,150 cubic meters) for remediation of canyon systems.	Environmental restoration activities are generally independent of the conveyance and transfer process; but, the conveyance and transfer scenarios may influence decisions on the timing, cleanup levels, and the inclusion of certain buildings in environmental restoration activities. The waste estimates would be roughly the same as for the No Action Alternative.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Transportation	Under the No Action Alternative, traffic generated from tract activities would not change from current levels. Gradual increases in regional traffic levels, especially during peak hours, would be expected to continue due to population growth, other area developments and increases in LANL employment.	As a direct consequence of the Proposed Action Alternative, there would be a small alteration of the overall daily commute for DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts. Development of the tracts would greatly increase the number of trips generated. Traffic entering or exiting 6 of the 10 tracts during the peak hours would increase by a range of 750 to 3,775 trips per day. Cumulative impacts to regional transportation include substantial increases in overall regional and local traffic that would require improvements to traffic controls, new roads, road widening, and bridges. The anticipated impacts to transportation would be expected to be concentrated near the Los Alamos townsite and the LANL area.
Infrastructure	Under the No Action Alternative, utility demand and infrastructure needs generated by current tract activities would not change from current levels. There would continue to be increases regionally in utility demand and in the need for additional sources, distribution systems and waste disposal infra-structure due to LANL activities and other regional developments. The electrical system is already at the limits of its capacity. The electrical power demand will exceed capacity with the addition of the Strategic Computing Complex. The projected No Action Alternative utility usage is: • Electrical Use: 799 gwh • Peak Power: 116 mw • Natural Gas: 3,273 mcf (92,730 mly) • Water: 1,851 mgy (7016 mly) • Solid Waste: 20,981 tpy (19,028 mty) • Wastewater Sewage: 962 mgy (3,642 mly)	Under the Proposed Action Alternative, assuming full implementation of the contemplated developments on the tracts within 10 years, the total estimated increases in utility usage would be: • Electrical Use: 32 gwh • Peak Power: 6 mw • Natural Gas: 459 mcf (13,000 mly) • Water: 382 mgy (1,446 mly) • Solid Waste: 2,385 tpy (2,163 mty) Increases in discharges could be 132 mgy (500 mly) for the Bayo Wastewater Treatment Plant and 41 mgy (155 mly) for the White Rock Wastewater Treatment Plant. The capacity of the electrical power system will be exceeded. Water usage demand is projected to exceed water rights. Natural gas delivery systems may have to be upgraded to handle the increased demand. The existing wastewater treatment capacity also would be exceeded. Solid waste production is expected to reduce the expected life of the regional landfill.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Noise	Under the No Action Alternative, noise levels associated with activities on the tracts would remain the same as they are currently. Minor increases in ambient noise would be expected due to anticipated increases in vehicle traffic, regional development and construction, and LANL activities such as explosives testing.	Ambient noise levels would be expected to increase above current levels for most of the contemplated land uses. Ambient noise levels associated with cultural preservation may decrease, and noise levels associated with natural areas would be expected to remain the same or increase slightly. Noise associated with transportation and utility corridors would remain the same or could increase with additional infrastructure construction and use. Demolition and construction activities would be expected to temporarily elevate noise levels on the tracts from the No Action Alternative levels to a range of 74 to 95 dBA. Residential uses typically would result in ambient noise levels between 50 and 70 dBA depending on traffic, density, and location. Commercial and industrial land uses typically would result in 60 to 70 dBA. Noise would be present during a greater part of the day than currently on the tracts that are developed for residential, commercial, and industrial land uses. Overall noise from vehicular traffic would increase.
Visual Resources	Under the No Action Alternative there would be no anticipated changes to visual resources. The visual character of the 10 subject tracts reflect the variety of the Los Alamos region. While some of the tracts include visually discordant elements of developed industrial sites, others include large expanses of natural and undeveloped canyon areas.	Under the Proposed Action Alternative, the scenic class objectives for most of the tracts would be met because the visual character would not change substantially. The visual resources of some tracts may be improved by the removal and replacement of industrial buildings. Development on currently undeveloped tracts would negatively impact visual character. Important viewsheds in the vicinity of BNM could be negatively impacted.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Socioeconomic	Under the No Action Alternative there would be no change in the employment, income, population, and housing associated with the 10 subject tracts. Regional economic growth and efforts toward self-sufficiency would continue but at a slower rate.	Under the Proposed Action Alternative, short-term economic gains due to construction activities would be expected. Long-term gains would be dependent on the intensity and success of the proposed development scenarios. If implemented, 320 businesses could be developed on the tracts, employing up to 6,080 workers and generating a total of 8,957 jobs within the ROI. As many as 2,360 residences would be placed on the tracts, increasing White Rock and Los Alamos population by 6,620 residents. Overall impacts to employment, income, population, and housing would be minor within the ROI, but would be concentrated in the Los Alamos area. Improvements would be expected in the Los Alamos County tax base but would probably not offset the loss of assistance payments, according to information provided by the County (see Chapter 18, Section 18.1).
Ecological Resources	Under the No Action Alternative, responsibility for ecological resource protection would remain with the DOE, and active management of these resources would continue. Regional growth would reduce the amount of undisturbed habitat and increase pressure on remaining ecological resources.	Under the Proposed Action Alternative, responsibility for ecological resource protection and planning would pass to the receiving parties, who may not have regulations that match the Federal review and protection process. Current resource protection and management plans would not be in effect for the subject tracts. Development or redevelopment of 826 acres (335 hectares), as contemplated by the receiving parties, could result in the heavy modification or destruction of approximately 770 acres (312 hectares) of relatively undisturbed habitat, primarily ponderosa pine forest and pinyon-juniper woodland. Development also would be expected to degrade large amounts of habitat near the developed portion of the land tracts. Habitat would be impacted or lost for Federal-protected species such as the American peregrine falcon and Mexican spotted owl. Habitat destruction would affect wildlife through direct mortality and relocation to other lands.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Cultural Resources	Under the No Action Alternative, responsibility for cultural resource protection would remain with the DOE, and active management of these resources would continue. Possible impacts from natural processes, vandalism, unauthorized collection of artifacts, and disturbance of traditional places and ceremonies would continue. Resource loss associated with regional development would continue.	Under the Proposed Action Alternative, there would be a transfer of over 254 known cultural resources and historic properties from the management and protection of the DOE. The disposition of the tracts may affect the protection and accessibility to Native American sacred sites or sites needed for traditional practices and the disposition of human remains, funerary objects, sacred objects, and objects of cultural patrimony. The subsequent development or redevelopment of approximately 826 acres (335 hectares) of the tracts could result in physical destruction, damage, or alteration of cultural resources on the subject tracts and in adjacent areas and disturbance of traditional religious practices. Increased access and recreational use could result in resource impacts in an area extending far beyond the development boundaries.
Geology and Soils	Under the No Action Alternative, impacts to geology and soils would be limited to natural effects of erosion, wildfires, and earthquakes.	Under the Proposed Action Alternative, soil would be disturbed in areas where development is planned and adjacent areas. Removal of vegetation and increased runoff from impermeable surfaces could increase erosion on some tracts.
Water Resources	Under the No Action Alternative, there would be no new additional impacts to surface water and groundwater quality and quantity. Increased use of groundwater due to LANL activities and regional growth would continue. New regional construction would increase the potential for degradation of surface water quality due to construction activity and increased pollutant loads and surface runoff volumes.	Contemplated residential, industrial, and commercial development would require an additional 382 mgy (1,446 mly) of groundwater, exceeding water rights, potentially accelerating drawdown of the main aquifer, and impacting amounts of cheaply available water. Placement of new water supply wells could impact groundwater quality. Construction activity and the creation of additional impermeable surfaces during development could impact surface water quality by increasing pollutant loads and runoff volumes.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Air Resources	Under the No Action Alternative, air quality impacts from the 10 tracts would remain the same. Monitoring by the State Air Quality Bureau has demonstrated that Region 3, which includes the 10 tracts, meets all applicable air quality standards. Expected regional growth and planned LANL activities would not impact air quality.	Under the Proposed Action Alternative, there would be increases in criteria pollutants from mobile sources and homes using natural gas or propane. Slight increases in emissions of hazardous air pollutants would be expected from industrial facilities. Development of the tracts would bring members of the public closer to LANL sources of hazardous, toxic chemical, and radioactive air pollutants. In all cases, health-based air quality standards would not be exceeded. Development would be associated with increased use of artificial light, which could impact the visibility of the night sky.
Global Climate Change	Emissions of greenhouse gases in the Los Alamos region from tract activities would remain the same. Expected regional growth and planned LANL activities would cause minor increases in emissions of greenhouse gases due to the combustion of natural gas, diesel fuel, gasoline, and firewood.	Emissions of greenhouse gases related to tract activities would increase more than 25-fold due to motor vehicle traffic and use of fossil fuels. This would represent a shift of impacts from other areas and would not be an important contribution to global climate change.

Table S-2. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Human Health	There are no identifiable human health consequences of the No Action Alternative. The possible human health impacts of radiation exposure, chemical contaminants, facility accidents, and natural event accidents would not be affected by implementation of the No Action Alternative.	Under the Proposed Action Alternative, no discernible individual human health effects are anticipated. As many as 900 new residents could be brought into closer proximity to LANL facilities at the DOE LAAO and DP Road Tracts, and another 2,200 residents and lodgers at the White Rock Tract. Commercial development could bring as many as 6,000 private-sector employees into existing radiation buffer zones at the DP Road, TA 21, and Airport Tracts. While the maximally exposed individual radiation doses would not increase, these developments would mean increased total population exposures to radiological and chemical emissions from normal LANL operations and hypothetical accidents. A substantial increase in the public collective radiation dose and latent cancer fatalities would result. Risk of developing excess latent cancer fatalities on the subject tracts from accident events could maximally increase from about 57 excess cancer deaths to about 98 excess cancer deaths. Development of the tracts by the recipients would involve construction risks to workers and also subsequent risks to workers engaged in industrial activities.
Environmental Justice	There are no high and adverse human health impacts to minorities or low-income populations in the area, and there would be no change under the No Action Alternative.	No direct adverse effects on minority or low-income populations are expected under the Proposed Action Alternative. Indirect impacts to TCPs potentially may cause disproportionately high or adverse effects on minority or low-income communities, but these effects cannot be determined at this point in the consultation process. The Homesteaders of the Pajarito Plateau (as regards all of the tracts) and legal counsel for the Pueblo of San Ildefonso (as regards four specific tracts) have expressed their opinions that the conveyance and transfer and contemplated uses would have additional environmental justice impacts on their populations.

Notes: gwh = gigawatt-hours, mcf = million cubic feet, mgy = million gallons per year, mw = megawatt, tpy = tons per year, mty = metric tons per year

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon	Land Use	Natural Areas and Residential	Land use would change. Approximately 570 acres (230 hectares) would be disturbed and developed for single- and multiple-family housing, roadways, and community facilities. Approximately 340 acres (137 hectares) would be reserved as natural areas and dedicated to open-space and recreational land uses. Natural areas would be reduced in size and used more intensively. Residential land use may be incompatible with resource protection on adjacent lands and some forms of recreational activity may be curtailed. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
		Cultural Preservation	Land use for the entire tract (approximately 910 acres [369 hectares]) would change from passively managed recreational and open-space uses to restricted access cultural preservation land. Future use of this tract by the general public would be eliminated and resources would be managed in a manner determined by the receiving party. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Natural Areas and Residential	Access roads and new streets within the tract would be required to support the residential development. An estimated 12,058 trips per day would be expected to be added to the local transportation system, with an increase of up to 819 trips during peak-hour traffic. The volume of additional trips would be expected to degrade traffic flow and to require improvements to regional transportation infrastructure.
		Cultural Preservation	A decrease in vehicle use would be expected on Rendija Canyon Road as public access is removed or restricted. Easements would be required to permit access to Santa Fe National Forest lands and to maintain or operate existing infrastructure.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Infrastructure	Natural Areas and Residential	Residential development would require new utility delivery and wastewater infrastructure. Utility usage would be estimated to increase annually by the following amounts: electricity, 8 gwh; natural gas, 164 mcf (4,644 mly); water, 126 mgy (477 mly); and sewage, 63 mgy (238 mly).
		Cultural Preservation	Current low utility usage would continue or be reduced, and some infrastructure supporting the Los Alamos Sportsman's Club may be removed.
	Noise	Natural Areas and Residential	Noise associated with construction would increase temporarily. Noise associated with residential and vehicle use would be more frequent and could increase from a current maximum of 40 dBA (estimated) to about 60 or 70 dBA. Noise from Los Alamos Sportsman's Club activities would be closer to residential receptors. Should Los Alamos Sportsman's Club activities eventually be relocated, these noise impacts would occur at the new location.
		Cultural Preservation	Noise events would greatly diminish due to restrictions on vehicular access and removal of the Los Alamos Sportsman's Club.
	Visual Resources	Natural Areas and Residential	Residential construction would impact high public value (Scenic Class II) visual resources.
		Cultural Preservation	Visual resources would be maintained; however, access to views within the tract would be reduced.
	Socio-economics	Natural Areas and Residential	The construction of new residential areas would temporarily increase employment in the ROI. Residential development would not impact overall stable growth within the ROI. Overall employment, income, population, housing, and community services would be expected to maintain stable growth within the ROI.
		Cultural Preservation	Current socioeconomic forces are likely to be maintained; however, a slight decrease is possible.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Ecological Resources	Natural Areas and Residential	Approximately 570 acres (230 hectares) of ponderosa pine forest and pinyon-juniper woodland habitat would be severely modified or lost due to residential development. The development would effectively disrupt the structure and function of the existing Rendija Canyon ecosystem. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals. There would be a loss of preferred habitat for the Federal-listed American peregrine falcon and Mexican spotted owl. The adjacent habitat would also experience a lost of quality due to segmentation and other effects. The loss of acreage due to development would result in a reduction of breeding and foraging habitat for wildlife currently utilizing the property.
		Cultural Preservation	The transition of this area from bare ground and weedy vegetation to natural vegetation (primarily grassland and ponderosa pine) is anticipated to result from the removal of Sportman's Club. Wildlife disturbance, both visual and auditory, from recreational use would be diminished. Consequently, ecological resources would be maintained and slightly improved as access to this area is reduced.
	Cultural Resources	Natural Areas and Residential	Access to cultural resources would increase with the introduction of additional residents, the sanctioning of recreational uses, and any trail enhancements, thereby causing possible destruction and damage to resources, vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Residential development would cause large-scale disturbance to the cultural resources of this tract due to construction, grading, and trenching; construction of access roads and new streets associated with this development would have similar impacts. Development may potentially impact natural resources utilized by traditional communities.
		Cultural Preservation	Dedicating the tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present; restricted access by the general public would help protect the resources. Another positive impact would be the passive preservation of resources and continued access to traditional cultural properties afforded to traditional practitioners of the receiving party. There may be negative impacts to some current traditional users if general access is restricted. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Geology and Soils	Natural Areas and Residential	Residential development (approximately 570 acres [230 hectares]), transportation networks and sewer and electrical utilities would cause soil disturbances. New structures would be susceptible to a magnitude 7 seismic event and to wildfire episodes. Wildfires, in addition to the potential impact to structures, would remove ground cover vegetation, causing increased soil erosion and transport via surface runoff.
		Cultural Preservation	The current geological conditions would likely remain the same; no impacts are expected. However, removal of the Sportman's Club facilities may cause soil disturbance; but restricting recreational access may decrease erosion.
	Water Resources	Natural Areas and Residential	Residential development could potentially impact surface water quality and quantity within and downstream of the tract, due to runoff from paved roads and developed areas. Development would contribute to overall regional groundwater drawdown and reduced quantities of cheaply treatable water supplies.
		Cultural Preservation	The current surface water and groundwater conditions would likely remain the same; no impacts are expected.
	Air Resources	Natural Areas and Residential	The canyon air quality would likely remain the same for hazardous and radioactive air pollutants. However, air quality would deteriorate slightly due to increased use of motor vehicles, which emit slight quantities of several criteria pollutants. Homes heated with natural gas, which emits trace quantities of some criteria pollutants, would also contribute to the reduction of air quality. Contributions to global climate change would increase on the tract from 30 tons (27 metric tons) per year to 22,000 tons (20,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential use of fossil fuels.
		Cultural Preservation	Dedicating this canyon to cultural preservation would result in fewer visitors, which, in turn, would reduce already negligible emissions of criteria pollutants and greenhouse gases. Air quality would be unchanged, and tract contributions to global climate change would be slightly reduced.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Human Health	Natural Areas and Residential	The addition of 3,500 new residents in close proximity to LANL facilities would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. Residential development also would introduce more sensitive receptors, such as children and pregnant females, to an area that currently has a single residence. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities. Physical injury to an increased number of individuals could also occur if any one of three natural events takes place (flood, seismic, or wildfire) in Rendija Canyon.
		Cultural Preservation	The human health consequences would be similar to the No Action Alternative.
	Environmental Justice	Natural Areas and Residential or Cultural Preservation	No disproportionately high and adverse impacts on minority and low-income populations are anticipated from implementing the contemplated land uses on this tract. Rendija Canyon has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent use would result in environmental justice impacts to the Pueblo's population. Modest economic benefits would arise from the additional jobs created during the construction of new housing in this area. However, restricting public use of roads and trails in Rendija Canyon would hinder public access to National Forest lands, which afford not only recreation opportunities for the general public but serve as traditional firewood gathering and collection areas for other forest products by local Hispanic and Native American populations. Therefore, restricted access to this area could have a disproportionately adverse impact on these minority populations if gathering and collection is sufficiently performed by low-income or minority populations in these areas.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO	Land Use	Residential	Land use would change from professional office to residential, which would be compatible with adjacent land use. An estimated 9 to 10 acres (3 to 4 hectares) of the total 15-acre (6-hectare) tract would be developed for multiple-family residential use. The DOE LAAO Building and steam plant would be removed. This land development would accommodate apartments or condominiums at an average density of 20 dwellings per acre or 180 to 200 dwellings. The remaining acreage would be used for parking, and open areas would be landscaped to maintain the residential character of the development. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
		Commercial	Commercial development would represent a continuation of current land use. The existing DOE administrative building would be converted to commercial office space that would accommodate a total of 6 businesses and 15 vehicles. The steam plant would remain, and no additional development is contemplated. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Residential	The proposed residential development would impact the daily commute for the DOE and contractor personnel relocated from the DOE LAAO; some will have a shorter drive to work, but most would have farther to travel. Traffic entering or exiting the area could increase by as many as 86 trips during peak hours of the work week.
		Commercial	Because land use would not change substantially, the current traffic volumes (defined as good operating conditions with stable flow) are anticipated to remain essentially the same with only a slight increase during peak hours.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Infrastructure	Residential	Residential development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 1.3 gwh; natural gas, 26 mcf (736 mly); water, 20 mgy (76 mly); and sewage, 10 mgy (38 mly). These increases are not anticipated to exceed the existing capacity for any utility.
		Commercial	Existing infrastructure would not need to be modified to accommodate commercial land use. Utility usage would be estimated to increase annually by the following amounts: electricity, 0.3 gwh; natural gas, 3 mcf (85 mly); water, 3 mgy (11 mly); and sewage, 1 mgy (4 mly). These increases are not anticipated to exceed the existing capacity for any utility.
	Noise	Residential	Residential use would result in ambient noise levels of about 60 to 70 dBA due to vehicular traffic and residential activities. There would be more vehicle traffic into and out of the tract (500 residents versus 130 employees), and it would occur during longer periods of the day. During demolition of existing building and construction of residences, ambient noise would increase temporarily from about 40 to 50 dBA to about 95 dBA.
		Commercial	The current noise level, which is largely determined by background noises from traffic on nearby Trinity Drive and Los Alamos Canyon bridge, would likely remain the same if the land is commercially used; that is, from 40 to 50 dB.
	Visual Resources	Residential	The developed portions of the tract are considered to be of low public value (Scenic Class IV), while the undeveloped portions are considered to be of moderate public value (Scenic Class III). Residential development would be accomplished without substantial change to the visual character of this tract.
		Commercial	No impacts are expected from this development scenario; the office building would remain, and no roads or other structures would be added.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Socio-economics	Residential	Construction activities would temporarily increase employment in the ROI, which, in turn, would generate increases in ROI income. However, no impacts on area population and housing would be expected because the majority of new residents on the tract and temporary jobs generated by this development would be filled by the existing ROI labor force.
		Commercial	There would be possible short-term economic gains from minor construction as well as long-term economic gains from the industries using the land. Approximately 120 workers would be employed on the tract and 200 jobs would be generated in the ROI and filled by the existing labor force; therefore, no impacts on area population and housing would be expected.
	Ecological Resources	Residential	Given the limited acreage involved and existing developed nature of the site, impacts are expected to be small. Approximately 6.5 acres (2.6 hectares) of ponderosa pine forest would be lost as the area is converted to housing, roadways, and residential landscaping. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.
		Commercial	Because no change in land use is expected under this development scenario, no adverse impacts to ecological resources are projected. However, the environmental review and protection processes for future activities would not be as rigorous as those that govern the DOE.
	Cultural Resources	Residential	This tract would be extensively altered by construction activities, including demolition of buildings, grading, and trenching. Two buildings considered potentially eligible to the NRHP would be demolished. Activities also could result in primary impacts to other unidentified historic properties through physical destruction, damage, or alteration.
		Commercial	No discernible impacts to cultural resources are expected because no new development is planned. The use of the DOE LAAO Building, a potentially eligible resource, would continue, and the building would not be demolished although modifications would be likely.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Geology and Soils	Residential	This development scenario would require extensive ground disturbance to remove existing structures and redesign for residential use.
		Commercial	No soil disturbance or change in availability of resources are anticipated. No impacts from this development scenario are expected.
	Water Resources	Residential	In developed areas, surface water quality may be indirectly affected outside the tract during and after construction. Development would not affect groundwater quality or quantity beneath the tract but may contribute to the overall regional water level decline and possibly result in degradation of water quality within the aquifer.
		Commercial	The current surface water and groundwater conditions would likely remain the same; no impacts are expected.
	Air Resources	Residential	There would be no emissions of hazardous or other chemical air pollutants and no emissions of radioactive air pollutants. However, air quality would deteriorate slightly due to increased use of motor vehicles, which emit slight quantities of several criteria pollutants (primarily trace amounts of carbon monoxide and ozone). Homes heated with natural gas, which emits trace quantities of some criteria pollutants, would also contribute to the reduction of air quality. Contributions to global climate change would increase from about 130 tons (120 metric tons) per year to an estimated 3,300 tons (3,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential use of fossil fuels.
		Commercial	The current air quality conditions would likely remain the same; no adverse impacts are expected. Contributions to global climate change would remain at an estimated 130 tons (120 metric tons) per year of carbon dioxide.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Human Health	Residential	The addition of 500 new residents in close proximity to LANL facilities would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. Residential development also would introduce more sensitive receptors, such as children and pregnant females, to an area that currently hosts only LANL-related workers. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Commercial	Commercial development poses the same human health consequences as those discussed for residential development, but are lessened by three factors: (1) fewer members of the public would use the tract (an estimated 120 workers), (2) workers would be present less often than residents, and (3) the work force would contain fewer sensitive receptors.
	Environmental Justice	Residential or Commercial	No disproportionately high and adverse impacts on minority and low-income populations are anticipated from implementing the contemplated land uses on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facility. Secondary effects would include small increases in business activity and would likely increase revenues to local government.
Miscellaneous Site 22	Land Use	Commercial	The land use of this tract (less than 0.5 acre [0.2 hectare]) would change from a LANL buffer area used for unauthorized parking to a sanctioned parking area. Activity levels would likely remain same and, therefore, no discernible impacts are expected. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party.
	All Others	Commercial	Commercial development of this tract is not expected to adversely impact any of the remaining resource areas; resource conditions would likely remain the same.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Miscellaneous Manhattan Monument	Land Use	Historic Preservation	Land use proposed for this site would result in the continued historic preservation of the tract. Landscaping and other routine maintenance activities would continue on an as-needed basis, and the general public would have unrestricted access to the site and its surrounding area. No environmental restoration activities are planned.
	Cultural Resources	Historic Preservation	This monument is a contributing element of an NRHP-listed resource and as such, according to the Criteria of Adverse Effect (36 CFR 800.5(a)(1), would be directly impacted if transferred. Impacts would be limited to the potential of transferring this NRHP-eligible resource out of the responsibility and protection of the DOE, which may result in a less rigorous standard of care.
	All Others	Historic Preservation	Historic preservation of this tract is not expected to adversely impact any of the remaining resource areas; resource conditions would likely remain the same.
DP Road	Land Use	Industrial and Commercial	Land use on the relatively level portions of the tract would change from previously disturbed, but mostly undeveloped, buffer lands. Contemplated development would be compatible with existing and adjacent land uses. Approximately 21 of 50 acres (8 of 20 hectares) would be developed for heavy commercial and industrial land use, and an additional 5 acres (2 hectares) would be developed for office space. When fully developed, this tract would be occupied by 40 new businesses with 900 total employees and 24 vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Site buildings would likely remain; but the RAD wastewater line would be removed.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Land Use	Commercial and Residential	Land use on the relatively level portions of the tract would change from previously disturbed, but mostly undeveloped, buffer lands. Contemplated development would be compatible with existing and adjacent land uses. Approximately 21 of 50 acres (8 of 20 hectares) would be developed as a residential trailer court that, when fully developed, would be occupied by 160 mobile homes, 400 new residents, and 330 personal vehicles. An additional 5 acres (2 hectares) would be developed for office space that, when fully developed, would be occupied by 10 new businesses with 225 total employees. Planned environmental restoration activities would occur prior to conveyance or transfer, but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Site buildings would likely remain; but the RAD wastewater line would be removed.
	Transportation	Industrial and Commercial or Commercial and Residential	For the proposed industrial and commercial development, an estimated 2,312 trips per day would be expected to be added to the local transportation system, with an increase of up to 296 trips during peak-hour traffic. For the proposed commercial and residential development, an estimated 1,941 trips would be expected to be added to the local transportation system, with an increase of up to 178 trips during peak-hour traffic. Consequently, the volume of these additional trips would likely degrade traffic flow and would require improvements to the area transportation infrastructure.
	Infrastructure	Industrial and Commercial	Mixed development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 2.3 gwh; natural gas, 22 mcf (623 mly); water, 20 mgy (76 mly); and sewage, 9 mgy (34 mly). These increases are not anticipated to exceed the existing capacity for any utility.
		Commercial and Residential	Mixed development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Annual utility usage would be estimated to increase by the following amounts: electricity, 1.6 gwh; natural gas, 26 mcf (736 mly); water, 21 mgy (79 mly); and sewage, 10 mgy (38 mly). These increases are not anticipated to exceed the existing capacity for any utility.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Noise	Industrial and Commercial	This land use scenario is estimated to result in an increase of as many as 900 new direct jobs, which would increase traffic flow. Although maximum noise from traffic would not be expected to increase significantly, traffic noises would likely be present for a greater portion of the day as the new employees enter and exit this area. Construction activities would temporarily increase ambient noise levels from about 65 dBA to a range of 74 to 95 dBA.
		Commercial and Residential	Commercial and residential development would have no appreciable difference in ambient noise levels. Noise from traffic would likely be present for a greater portion of the day. Construction activities would be expected to temporarily increase noise levels from about 65 dBA to a range of 74 to 95 dBA
	Visual Resources	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. The current moderate public value (Scenic Class III) and low public value (Scenic Class IV) visual resources would be maintained; no major impacts are anticipated.
	Socio-economics	Industrial and Commercial	The use of this tract for industrial and commercial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 900 workers would be employed on the tract, and a total of 1,200 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
		Commercial and Residential	The impacts of this land use scenario would be similar to the industrial and commercial land use scenario. However, fewer long-term jobs would be generated because there would be fewer businesses on the land. The addition of 400 residents on the tract would not be expected to impact overall ROI population or public services.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Ecological Resources	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Approximately 24 acres (10 hectares) of ponderosa pine forest and pinyon-juniper woodland would be lost; as a result, habitat would be degraded or lost for Federal-protected species such as the American peregrine falcon and Mexican spotted owl. Habitat destruction would affect wildlife through direct mortality and relocation to other lands. In areas near residential development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.
	Cultural Resources	Industrial and Commercial	Industrial and commercial development would disturb any cultural resources present due to construction, grading, and trenching. These impacts would include the potential destruction of buildings, archaeological sites, and traditional cultural property locations. Cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
		Commercial and Residential	The impacts of this land use scenario would be similar to the industrial and commercial land use scenario. However, the development of a residential trailer park could increase access to any cultural resources present nearby. Increased access could result in physical destruction, damage, vandalism, or alteration of cultural resources and disturbance of any traditional practices and ceremonies.
	Geology and Soils	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Soil would be disturbed to upgrade utilities and roadways, and for any removal of existing structures or construction of new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events, and the stability of the canyon rim must be considered. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Water	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Development will not affect groundwater quality or quantity beneath the tract; however, any associated increase in water usage may contribute to the overall regional water level decline, which could result in degradation of water quality within the aquifer. Surface water may be impacted if motor oil, gasoline, or other such contaminants are washed from paved areas into the drainage during storm events. Also, runoff may have more erosive power if it is flowing across areas that have been denuded, thereby transporting more sediment into the drainages.
	Air Resources	Industrial and Commercial	This land use scenario would result in an increase in the emittance of criteria pollutants from mobile sources travelling along Trinity Drive and DP Road. No substantial emissions of hazardous, chemical, or radioactive air pollutants would be expected from this land usage. Air concentrations at the tract would deliver a maximum radiation dose of 2.5 millirem to people residing there year-round. Contributions to global climate change would increase appreciably from 400 to 1,800 tons (350 to 1,650 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic.
		Commercial and Residential	For this land use scenario, ambient air concentrations of criteria pollutants would continue to comply with national and State standards; hazardous chemical and radioactive air concentrations would continue to be below health-based standards. However, residential usage of this tract would have less of an impact on air quality than industrial activities because this scenario would generate less vehicle traffic. Contributions to global climate change would increase from 400 to 3,350 tons (350 to 3,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential and office use of fossil fuels.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Human Health	Industrial and Commercial	The average occupancy (370 people) would be approximately the same as for the commercial and residential land use scenario and, therefore, impacts would be similar. Consequences from this scenario are lesser, however, by two factors: (1) workers would be present less often than residents, and (2) the work force would contain few sensitive receptors (children and pregnant females). New employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Commercial and Residential	The impacts of this land use scenario are similar to the industrial and commercial land use scenario. However, residential development would introduce more sensitive receptors, such as children and pregnant females, to an area that currently hosts only LANL-related workers.
	Environmental Justice	Industrial and Commercial or Commercial and Residential	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facility. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any single group.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21	Land Use	Commercial and Industrial	Land use would change from LANL industrial uses to private commercial and industrial development, and LANL personnel and activities would have to be relocated. A minimum of 55 acres (22 hectares) would be developed or redeveloped for commercial and industrial uses. Commercial uses could include businesses such as office buildings and business parks, warehouses, parking areas, service stations, repair garages, tire shops, motels and hotels, large stores, and drive-in or take-out facilities. Industrial uses could include light fabrication and manufacturing facilities compatible with other uses currently located at and adjacent to the site. When fully developed, the tract would be occupied by 70 businesses, 1,900 employees, and 56 commercial vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Current structures and the RAD wastewater line would be removed.
	Transportation	Commercial and Industrial	For the proposed commercial and industrial development, an estimated 3,471 trips per day would be expected to be added to the local transportation system, with an increase of up to 464 trips during peak-hour traffic. These additional trips would likely degrade traffic flow and would require improvements to the area transportation infrastructure. Transportation effects of relocating TA 21 personnel would include minor increases in traffic congestion in the immediate area of the new facilities during morning and evening hours.
	Infrastructure	Commercial and Industrial	This proposed land use scenario would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 4.0 gwh; natural gas, 39 mcf (1,100 mly); water, 35 mgy (132 mly); and sewage, 19 mgy (72 mly).
	Noise	Commercial and Industrial	Typical construction equipment for use in building the new commercial and industrial facilities temporarily would increase ambient noise levels from less than 50 dBA to a range of 74 to 95 dBA. Maximum noise from traffic would not be expected to increase significantly over current conditions, but would likely be present for a greater portion of the day as new employees enter and exit the area.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21 (Continued)	Visual Resources	Commercial and Industrial	Overall impacts to visual resources would not be expected to be substantial as a result of this land use. Low public value (Scenic Class IV) visual resources would not be affected or would be improved in developed areas.
	Socio-economics	Commercial and Industrial	The use of this tract for commercial and industrial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 1,900 workers would be employed on the tract, and a total of 3,100 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
	Ecological Resources	Commercial and Industrial	Under this proposed development scenario, most of the development footprint would be on previously disturbed land. However, approximately 5 acres (2 hectares) of ponderosa pine forest, pinyon-juniper woodland, shrub, and grassland habitat would be severely modified or lost; as a result, habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and Mexican spotted owl. Habitat destruction would extend to adjacent undeveloped areas and would affect wildlife through direct mortality and relocation to other lands.
	Cultural Resources	Commercial and Industrial	Commercial and industrial development would disturb any cultural resources present due to demolition, construction, grading, and trenching. These impacts would include the destruction of archaeological sites, potentially eligible historic buildings, and traditional cultural property locations. Cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Commercial and Industrial	Soil would be disturbed to upgrade utilities and roadways and for any removal of existing structures or construction of new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21 (Continued)	Water Resources	Commercial and Industrial	Development will not affect groundwater quality or quantity beneath the tract. However, any associated increase in water usage may contribute to the overall regional water level decline, possibly resulting in degradation of water quality within the aquifer. Two sources of surface water would be removed prior to disposition of the tract, thereby reducing the quantity of surface water discharged into the adjacent canyons. Also, runoff may have more erosive power if it is flowing across areas that have been denuded, thereby transporting more sediment into the drainages.
	Air Resources	Commercial and Industrial	This land use scenario would result in a slight increase in the emittance of criteria pollutants from mobile sources and businesses using natural gas or propane. However, the removal of LANL operations from this tract would result in decreased concentrations of hazardous and chemical air pollutants. In short, air quality would improve somewhat. Doses from the inhalation of radioactive air pollutants would continue at approximately 2.5 to 4.0 millirem per year; most of this dose is the result of operations at the Los Alamos Neutron Science Center, not the idled TA 21 operations. Contributions to global climate change would decrease from an estimated 7,800 to 2,500 tons (7,000 to 2,200 metric tons) per year of carbon dioxide, due largely to the cessation of LANL activities. Regionally, carbon dioxide emissions could increase by 2,500 tons (2,267 metric tons) per year if tritium research is continued elsewhere on LANL.
	Human Health	Commercial and Industrial	As many as 1,900 private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
	Environmental Justice	Commercial and Industrial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land use on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facilities. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any single group.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport	Land Use	Airport, Commercial, and Industrial	Proposed land use identified for the Airport Tract north of East Road could include the continued use of approximately 93 acres (38 hectares) for the Airport and other uses. An area of relatively undisturbed land of about 16 acres (6 hectares) also could be developed for heavy commercial land use purposes. Proposed land use to the south of East Road could include the development of about 90 acres (36 hectares) of relatively undisturbed land as an office and business park based on airport-related industry and potential retail uses. When fully developed, lands on both sides of East Road would be occupied by 200 businesses, 3,100 employees, and 120 commercial vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Airport, Commercial, and Industrial	For the proposed development, an estimated 14,266 trips per day would be expected to be added to the local transportation system, with an increase of up to 1,554 trips during peak-hour traffic. These additional trips would double the traffic on State Road 502, would create traffic jam conditions, and would require improvements to transportation infrastructure.
	Infrastructure	Airport, Commercial, and Industrial	Airport, commercial, and industrial development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 11 gwh; natural gas, 110 mcf (3,120 mly); water, 100 mgy (379 mly); and sewage, 31 mgy (117 mly).
	Noise	Airport, Commercial, and Industrial	Under this land use scenario, construction activities would temporarily increase ambient noise levels from less than 40 dBA to a range of 74 to 95 dBA, resulting from typical construction equipment operation. Once fully developed, traffic from employees and other travelers would comprise the majority of noise in the area. Noise levels along State Road 502 would likely remain the same at about 60 or 70 dBA; however, noises along the northern parts of the tract would increase significantly due to increased traffic along new roads and new commercial and industrial activities, in addition to Airport activities.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport (Continued)	Visual Resources	Airport, Commercial, and Industrial	The proposed airport, commercial, and industrial development would maintain moderate public value (Scenic Class III) visual resources. Development in the southern portion of the tract would impact high public value (Scenic Class II) visual resources from the road and Airport.
	Socio-economics	Airport, Commercial, and Industrial	The use of this tract for airport, commercial, and industrial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 3,100 workers would be employed on the tract, and a total of 4,327 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
	Ecological Resources	Airport, Commercial, and Industrial	Under this proposed development scenario, approximately 90 acres (36 hectares) of ponderosa pine forest and pinyon-juniper woodland would be severely modified or lost; as a result, habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and Mexican spotted owl. Habitat degradation would extend to adjacent lands and would affect wildlife through direct mortality and relocation to other lands. The loss of acreage due to development would result in a reduction of breeding and foraging habitat for wildlife currently utilizing the property.
	Cultural Resources	Airport, Commercial, and Industrial	Under this land use scenario, portions of the tract would be extensively altered by construction activities, grading, and trenching. These activities could result in primary impacts to eligible resources through physical destruction, demolition, damage, or alteration. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions.
	Geology and Soils	Airport, Commercial, and Industrial	Soil would be disturbed to upgrade utilities and roadways and to construct new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport (Continued)	Water Resources	Airport, Commercial, and Industrial	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.
	Air Resources	Airport, Commercial, and Industrial	This land use scenario would result in a slight increase in the emittance of criteria pollutants due to space heating, increased motor vehicle traffic, and, perhaps, steam-generating boilers. However, ambient air concentrations would likely remain with Federal and State standards, and the Los Alamos region would remain an attainment area. Emissions of hazardous other chemical air pollutants are likely to be absent or regulated. Doses from the inhalation of radioactive air pollutants from LANL would continue at approximately 2.1 (western edge) to 5.4 (eastern edge) millirem per year. Contributions to global climate change would increase from an estimated 6 to 6,900 tons (5 to 6,300 metric tons) per year of carbon dioxide, due largely to vehicle use and space and water heating.
	Human Health	Airport, Commercial, and Industrial	As many as 3,100 private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
	Environmental Justice	Airport, Commercial and Industrial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land use on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facilities. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any minority or low-income populations..

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y	Land Use	Cultural Preservation	The entire tract would be held in cultural preservation; therefore, access to the tract for public recreation and other uses would be denied, and these recreational opportunities would be lost. This decrease in activity would likely prove beneficial to adjacent land use, including Bandelier National Monument and TA 72 operations. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the two canyon systems.
		Natural Areas, Transportation, and Utilities	The entire tract would be held as an undeveloped natural area and passively managed. Portions of the tract could be used for additions or improvements to utilities or utility corridors, including construction of roads for improved access. Also, the general public would have access to the tract for recreational purposes. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the two canyon systems.
	Transportation	Cultural Preservation or Natural Areas, Transportation, and Utilities	These contemplated land use scenarios would result in similar impacts. The possible construction of new roads to improve access to utilities on the tract would have no impact on traffic circulation in the area. Therefore, it is expected that the future operational performance of State Road 502, State Road 4, and East Jemez Road would remain similar to that of the existing performance.
	Infrastructure	Cultural Preservation	Under this land use scenario, no changes are anticipated that would affect the utilities and infrastructure; easements for continued use of utilities and the transportation corridor would likely continue.
		Natural Areas, Transportation, and Utilities	Most of the tract would be maintained as a natural area under this land use scenario; however, some land would be used for additions or improvements to utilities such as well construction or utility corridors.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y (Continued)	Noise	Cultural Preservation or Natural Areas, Transportation, and Utilities	Continued use of this tract as a transportation corridor is contemplated under both land use scenarios. Assuming that the two state highways remain in use, ambient noise will probably remain at its currently level, typically ranging from 60 to 70 dBA, with spikes to 90 dBA.
	Visual Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	This tract would maintain relatively high public value (Scenic Class II) visual resources under both of the land use scenarios; the objective would be to retain the existing visual character of the landscape as much as possible. Access to views within the tract may be limited under the cultural preservation scenario.
	Socio-economics	Cultural Preservation or Natural Areas, Transportation, and Utilities	The contemplated land uses of this tract would have little or no impact on employment, income, population, or housing.
	Ecological Resources	Cultural Preservation	If the tract is culturally preserved, wildlife disturbance, both visual and auditory, from recreational use would be diminished; consequently, habitat for most species would be augmented and improved.
		Natural Areas, Transportation, and Utilities	Under this proposed land use scenario, the general public would have access for recreational purposes. Therefore, impacts to natural resources from recreational use are expected to be minimal, sporadic, and temporary. Minor habitat loss would be expected from development of utility improvements and minor roadway construction.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y (Continued)	Cultural Resources	Cultural Preservation	Dedicating this tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present. The restriction of access by the general public is anticipated to help protect the resources from vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. There may be negative impacts to some current traditional users if general access is restricted.
		Natural Areas, Transportation, and Utilities	Under this land use scenario, the maintenance of natural areas would allow the passive preservation of cultural resources on the tract. The sanctioning of recreational activities and possible road construction could increase access to resources, increasing opportunities for vandalism and disturbance of traditional practices. Construction activities required for maintaining utilities and establishing new roads could result in physical destruction, damage, or alteration of cultural resources present. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Cultural Preservation	If the tract is culturally preserved, there would be no disturbance from development. However, the tract would remain susceptible to wildfires, which could increase erosion potential.
		Natural Areas, Transportation, and Utilities	Some degree of land disturbance associated with additions or improvements to utilities, utility corridors, and access roads would be expected under this land use scenario. In addition, existing and upgraded structures would be vulnerable to greater than magnitude 7 seismic events and wildfire episodes.
	Water Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	Neither of these proposed land uses would directly or indirectly affect surface water or groundwater quality or quantity.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y (Continued)	Air Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	No additional transportation activities are anticipated with either of these land use scenarios and, as such, there would be no additional emission of air pollutants. Air quality would be expected to remain high, and doses from radioactive pollutants from LANL operations would remain less than 2 millirem per year. No contributions to global climate change would be expected because there would be few or no structures on the tract emitting greenhouse gases.
	Human Health	Cultural Preservation or Natural Areas, Transportation, and Utilities	The contemplated land uses for this tract do not increase, and may decrease, the number of workers or members of the public exposed to radiological and chemical air pollutants emitted by LANL operations.
	Environmental Justice	Cultural Preservation or Natural Areas, Transportation, and Utilities	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The White Rock Y Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and contemplated uses would result in environmental justice impacts to the Pueblo's population.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74	Land Use	Cultural Preservation	Land use would change from open space buffer with unsanctioned recreational use to cultural preservation. The entire tract would be held in cultural preservation; therefore, access to the tract for public recreation and other uses would be denied and these recreational opportunities would be lost. Land use would be dominated by cultural practices and activities necessary to meet continuing stewardship needs. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels and buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
		Natural Areas and Utilities	Under this land use scenario, the entire tract would be held as a natural area and passively managed. Portions of the tract would be used for additions or improvements to utilities, including well construction, enlargement of sewage treatment facilities, utility corridors, and roadways. Access to the majority of the tract by the general public would be unrestricted. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
	Transportation	Cultural Preservation, or Natural Areas and Utilities	These contemplated land use scenarios would result in similar impacts. The possible construction of new roads to improve access to utilities on the tract would have no impact on traffic circulation in the area. Therefore, the future operational performance of State Road 502 and State Road 4 would be expected to remain similar to that of the existing performance.
	Infrastructure	Cultural Preservation	Under this land use scenario, no change is anticipated that would affect the existing utilities and infrastructure; easements for continued use of utilities would likely continue.
		Natural Areas and Utilities	Most of the tract would be maintained as a natural area under this land use scenario; however, some land could be used for additions or improvements to utilities, such as well construction, the construction of sewage treatment facilities, or utility corridors or roadways.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Noise	Cultural Preservation	If this tract is culturally preserved, ambient noise levels along the southern edge of the tract, which parallels State Road 502, would remain at an estimated 60 to 90 dBA. The remaining tract would remain largely undisturbed by noise (10 to 20 dBA).
		Natural Areas and Utilities	Under this land use scenario, daytime ambient noise levels would likely increase slightly due to vehicle usage, recreational activities, and utility and road construction.
	Visual Resources	Cultural Preservation or Natural Areas and Utilities	This tract would maintain relatively high public value (Scenic Class II) visual resources under both of the land use scenarios; the objective would be to retain the existing visual character of the landscape as much as possible. Access to views within the site may be reduced under cultural preservation.
	Socio-economics	Cultural Preservation or Natural Areas and Utilities	The contemplated land uses for this tract would have little or no impact on employment, income, population, or housing. Modest economic activity may be associated with improvements to utility infrastructure.
	Ecological Resources	Cultural Preservation	If the tract is culturally preserved, wildlife disturbance, both visual and auditory, from recreational use would be diminished; consequently, habitat for most species would be augmented and improved.
		Natural Areas and Utilities	Under this proposed land use scenario, the general public would have access for recreational purposes; but only minimal impacts to natural resources would be expected from such use. If motorized recreational vehicles are permitted, they could contribute to habitat degradation and impacts to the mortality, reproduction, and range of some animals. Minor or short-term consequences to area wildlife would be expected from the development of utility improvements.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Cultural Resources	Cultural Preservation	Dedicating this tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present. The restriction of access by the general public is anticipated to help protect the resources from vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. There may be negative impacts to some current traditional users if general access is restricted.
		Natural Areas and Utilities	Under this land use scenario, the maintenance of natural areas would allow the passive preservation of cultural resources on the tract. The sanctioning of recreational activities and possible road construction could increase access to resources, increasing opportunities for vandalism and disturbance of cultural practices. Construction activities required for maintaining or improving utilities could result in physical destruction, damage, or alteration of cultural resources present. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of the character with the resources, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Cultural Preservation	If the tract is culturally preserved, there would be no disturbance from development. However, the tract would remain susceptible to wildfires, which could increase erosion potential. Little potential exists for seismic impacts.
		Natural Areas and Utilities	Some degree of land disturbance related to new construction or improvement of utilities such as well construction and sewage treatment facilities would be expected under this land use scenario. In addition, existing and expanded structures would be vulnerable to greater than magnitude 7 seismic events and wildfire episodes.
	Water Resources	Cultural Preservation or Natural Areas and Utilities	Neither of these proposed land uses would directly or indirectly affect surface water or groundwater quality or quantity.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Air Resources	Cultural Preservation or Natural Areas and Utilities	No emissions of hazardous or radioactive air pollutants are anticipated with either of these land use scenarios. Further, although there could be a slight increase in emissions of criteria pollutants, concentrations would remain well within State and Federal standards. Contributions to global climate change would continue as small emissions of carbon dioxide continue from the highway maintenance facility.
	Human Health	Cultural Preservation or Natural Areas and Utilities	The contemplated land uses for this tract do not increase, and may decrease, the number of workers or members of the public exposed to radiological and chemical air pollutants emitted by LANL operations.
	Environmental Justice	Cultural Preservation or Natural Areas and Utilities	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The TA 74 Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent use would result in environmental justice impacts to the Pueblo's population.
White Rock	Land Use	Commercial and Residential	The commercial and residential development land use scenario would result in a notable change in land use patterns in the White Rock community. Approximately 20 of 100 acres (8 of 40 hectares) would be commercially developed as a recreational vehicle park for an estimated 160 recreational vehicle spaces. Residential areas would include approximately 5 and 35 acres (2 and 14 hectares) of medium- and high-density development, respectively. When the tract is fully developed, there would be 760 new dwelling units, 2,200 new residents, and 1,730 personal vehicles, including recreational vehicles and their occupants. The additional 40 acres (18 hectares) surrounding and between developed areas would be maintained as open space. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Land Use	Cultural Preservation and Commercial	This contemplated land use scenario would include the use of less than 10 acres (4 hectares) of the tract for rental storage space or retail businesses, which would, for the most part, represent a continuation of existing and adjacent land use. When fully developed, this portion of the tract would contain 4 businesses with 60 employees and 2 commercial vehicles. Preserved portions of the tract would result in the elimination of public access to the site. However, site activities are already limited by access restrictions on adjacent LANL land and, therefore, no significant change would be anticipated. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
	Transportation	Commercial and Residential	For the proposed development, an estimated 5,815 trips per day would be expected to be added to the local transportation system, with an increase of up to 378 trips on State Road 4 and State Road 502 during peak-hour traffic. These volumes and additional trips would be expected to create traffic jam conditions on State Road 4; widening of this road would be required to accommodate the additional traffic volume. Pajarito Road would continue to operate at maximum capacity under this land use scenario.
		Cultural Preservation and Commercial	The contemplated land use of this tract would result in no significant changes in traffic volume on State Road 4 or Pajarito Road near the site.
	Infrastructure	Commercial and Residential	Commercial and residential development would require enhancement of existing infra-structure: electric, gas, water, and sewage lines would need to be upgraded to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 5.2 gwh; natural gas, 99 mcf (2,800 mly); water, 81 mgy (307 mly); and sewage, 41 mgy (155 mly).
		Cultural Preservation and Commercial	Under this land use scenario, no utility upgrading would be necessary due to the small number of anticipated businesses; however, some extension of existing utility lines could be required. Utility usage would be estimated to increase annually by the following amounts: electricity, 0.2 gwh; natural gas, 2 mcf (57 mly); water, 2 mgy (8 mly); and sewage, 1 mgy (4 mly).

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Noise	Commercial and Residential	Noise levels on the tract would increase due to increased traffic and number of residents. Although noise levels along State Road 4 would likely remain in the range of 60 to 70 dBA, significant noise increases would occur on the remaining parts of the tract; that is, existing noise levels of 20 to 30 dBA would increase from 40 to 50 dBA. During construction, noises levels would be expected to range from 74 to 95 dBA.
		Cultural Preservation and Commercial	Under cultural preservation, tract noise levels would remain the same as they are currently; however, during commercial construction, noises levels would be expected to range from 74 to 95 dBA.
	Visual Resources	Commercial and Residential or Cultural Preservation and Commercial	This tract would maintain relatively low public value (Scenic Class IV) visual resources under both of the land use scenarios. However, commercial development under either land use scenario would impact existing moderate public value (Scenic Class III) visual resources on the northwest side of State Road 4 with lesser impacts under the cultural preservation and commercial development land use scenario.
	Socio-economics	Commercial and Residential	The use of this tract for commercial and residential development would generate increases in area income; however, these changes would be temporary, lasting only during the construction period. Minor temporary increases in employment are anticipated from the construction of new facilities, which would, in turn, generate increases in regional income. A small number of jobs would be generated by the operation of the recreational vehicle park. Jobs would be expected to be filled by the existing ROI labor force.
		Cultural Preservation and Commercial	Under this land use scenario, there would be short-term increases in area employment and income associated with the construction of limited commercial development and long-term increases once the facilities are operational. These impacts would be greater than those for the commercial and residential land use scenario in that, after development is completed, 60 workers would be employed on the tract and a total of 100 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Ecological Resources	Commercial and Residential	Approximately 60 acres (24 hectares) of pinyon-juniper woodland would be severely modified or lost under this proposed land use scenario. Habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and southwestern willow flycatcher. Habitat destruction would affect wildlife through direct mortality and relocation to other lands. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.
		Cultural Preservation and Commercial	Under this land use scenario, the potential impacts to natural resources would be similar but less compared to the commercial and residential development scenario. Commercial development would be limited to less than 10 acres (4 hectares) near the highway. Lands culturally preserved would not undergo construction, thus preserving the current vegetation and wildlife habitat. In addition, impacts to wildlife disturbance from recreational use would be diminished due to limited public access. Consequently, habitat for most wildlife species would be augmented and improved.
	Cultural Resources	Commercial and Residential	Under this proposed land use scenario, approximately 60 acres (23 hectares) would be directly disturbed by construction activities. Commercial and residential development would cause large-scale disturbance to any cultural resources present due to construction, grading, and trenching. These activities could result in primary impacts to cultural resources through physical destruction, demolition, damage, or alteration. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities. In addition, access to cultural resources would increase with the introduction of additional residents, thereby causing possible destruction and damage to resources, vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Cultural Resources	Cultural Preservation and Commercial	Dedicating the tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present; restricted access by the general public would help protect the resources. Another positive impact would be the passive preservation of resources and continued access to traditional cultural properties afforded to traditional practitioners of the receiving party. There may be negative impacts to some current traditional users if general access is restricted. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. Commercial development, although limited, would cause disturbance to any cultural resources present due to construction, grading, and trenching. These impacts could include the destruction of archaeological sites and traditional cultural property locations. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resources, such as visual or audible intrusions.
	Geology and Soils	Commercial and Residential	The contemplated land use identified for this tract would result in a total of approximately 60 acres (24 hectares) of disturbed land. Any structures would be susceptible to a magnitude 7 seismic event.
		Cultural Preservation and Commercial	The cultural preservation land use scenario limits commercial development, resulting in fewer ground disturbing impacts.
	Water Resources	Commercial and Residential	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Water Resources	Cultural Preservation and Commercial	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.
	Air Resources	Commercial and Residential	Increase in criteria pollutants from mobile sources, homes, and businesses using natural gas or propane. No new sources of hazardous or radioactive air pollutants are expected. The current baseline would remain unchanged: dose is 1.0 millirem from LANL operations. Contributions to global climate change from tract activities would increase considerably from nearly zero to approximately 14,000 tons (12,600 metric tons) per year of carbon dioxide due to the increase in motor vehicle traffic and commercial and residential fossil fuel use.
		Cultural Preservation and Commercial	No discernible difference in air quality is expected. Emissions of criteria pollutants will increase slightly but remain within State and Federal standards for ambient air quality. Contributions to global climate change from tract activities would increase slightly, from nearly zero to about 150 tons (130 metric tons) per year of carbon dioxide.
	Human Health	Commercial and Residential	As many as 2,200 new residents and lodgers including sensitive receptors would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Cultural Preservation and Commercial	A small number of private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.

Table S-3. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Environmental Justice	Commercial and Residential or Cultural Preservation and Commercial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The White Rock Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that the conveyance and subsequent use of the tract would result in environmental justice impacts to the Pueblo's population.

Notes: Acreages are approximate and may differ from actual ground surveys conducted later in the conveyance and transfer process.

dBA = decibel A-weighted scale, gwh = gigawatts per hour, mcf = million cubic feet, mgy = million gallons per year, mly = million liters per year, mty = metric tons per year